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THE INLAND ARCHITECT AND NEWS RECORD

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**Final
Series of
World's Fair
Illustrations.**

With the July issue THE INLAND ARCHITECT commenced its series of photographs of Columbian Exposition Architecture which will be continued throughout the year. At the commencement the elevations of the buildings were published, followed by perspective views. Then, as construction progressed, the different forms were presented by photograph. Now, in their complete form, with the landscape effects and sculptured accessories, the photogravure edition will present what will, it is hoped, be the most complete set of views obtainable. It will not be the aim to give to our readers a large number of general views, but rather the best of the architecture in detail, and much of this will be selected from points where the general photographer will not reach. Each view is carefully selected, the point of view and the exact hour to secure the best possible photographic effect noted, and these instructions must not only be followed by the photographer, but none but perfect negatives are accepted. Each view will be described in detail, and as much of interesting circumstance as seems appropriate will be included in the descriptions from data that have been gathered by day-to-day observation. In fact, it is probable that THE INLAND ARCHITECT will fulfill its promise of two years ago of giving to its readers from month to month an accurate and concise exposition of the World's Fair in construction and design from its beginning to its completion.

**Twenty-
Seventh
Convention,
A. I. A.**

The twenty-seventh annual convention of the American Institute of Architects, which was held at Chicago, July 31 and August 1, in the Art Institute building, was in no sense a convention, as the work done was simply routine business. Though there was no discussion upon any subject, this should not be taken as an indication of inactivity, because it was the intention to devote as little time to convention and allow as much for inspection of the Exposition buildings during the week as possible. The election of D. H. Burnham as president of the Institute will be appreciated by every member. It seems particularly fitting that the foremost name in the profession now before the American people should become the head of its representative society. Mr. Burnham's work needs no eulogy. It has brought him, while yet a young man, the degree of Master of Liberal Arts from both Yale and Harvard Universities; it has given him the confidence of the engineers and architects of the world, and it is now indorsed by the Institute in his election to its presidency. Mr. Alfred Stone took the secretaryship when it was laid down by Mr. Adler, and has shown a rare adaptability for the work, and it was fitting that this should be indorsed by his election, and this in spite of his personal plea that the secretary should be a western man. The committees to whom important work was confided a year ago should see that the several subjects upon which they are supposed to be engaged should receive the necessary attention. At the convention a year ago a great many defects were pointed out in the constitution and by-laws, particularly those portions relating to the relationship of Chapters with the Institute. These should be examined

into. The life of local and state Chapters is endangered by delay, and it is this committee's duty to investigate and recommend some plan for their relief. The year will probably not be a busy one for architects, and it seems that advantage might be taken of this lull in professional work to accomplish many of those necessary reforms in the conduct of practice that heretofore have been discussed in conventions, perhaps, but have been lost sight of in the interim.

**The World's
Congress of
Architects
at Chicago.**

As a congress of architects that which convened in Chicago during the first week of the current month was as successful as such gatherings usually are. A large number of valuable papers were presented, representatives of all the large architectural societies of foreign countries, excepting Australia, were present, and the membership of the American Institute was as representative as usual. The gathering, however, was principally to see the Columbian Exposition and to examine constructive methods in vogue in Chicago. This each delegate was enabled to do thoroughly through the courtesy of Chicago architects, who gave their time and knowledge freely to the visitors. The Illinois Chapter entertained at the Institute of Building Arts each day with a luncheon, and on the second day of the gathering provided a coaching trip through the parks and boulevards. Mr. D. H. Burnham, chairman of the congress, gave a breakfast to the foreign visitors and included the fine art judges. This was followed throughout the stay of the visitors by special courtesies at the Fair grounds. The Committee on Entertainment of the Institute, S. A. Treat and W. W. Clay, provided a most enjoyable diversion in the shape of steamboat excursion on the lake, ending at the Fair grounds in the evening, witnessing the fireworks display and electric illumination.

**Architectural
School
at Chicago
Assured.**

It is now generally assured that the nucleus of an architectural and engineering school, which originated with the Chicago Art Institute two years ago in the establishment of its architectural class under the direction of Mr. Louis Millet, will grow into an institution equal in scope with the "Teck" or Columbia College School of Mines. The trustees of the Art Institute and those of the New Armour Institute have formed a union between the two schools in which will be established a full and thorough architectural course. The Armour Institute will furnish the scientific and mathematical instruction. Its entire scientific equipment with departments in mechanical engineering, electricity and civil engineering, with laboratories, shops, library, etc., will all be placed at the disposal of architectural students, while the vast collection of rare works in the Art Institute, embracing not only pictures and sculptures but many objects of art in applied design, such as Greek vases, metals, textiles, antiquities, furniture, etc., will be open to the students. Far more important than these to the architectural student will be the great Trocadero collection of casts sent to the Columbian Exposition by the French government, which will be transferred to the Art Institute at the close. The course will open September 14 under the general direction of W. M. R. French, of the Art Institute, and Rev. F. W. Gunsaulus, of the Armour Institute.

**The Robert
Clark
Medal
Competition.**

The fifth annual competition for the Robert Clark medals, the subject for which was published in the July issue, presents an interesting problem, its attractiveness largely lying in the difficulty of solution. As one of the two great competitions open to draftsmen in the United States, in which honorable distinction may be earned the Clark competition should be entered by every draftsman who enjoys a serious problem, and the acquirement of knowledge in his profession. It was founded six years ago by Mr. Robert Clark, of Chicago, a Scotchman whose architectural studies and observation had prompted the wish to do something to further the study of the profession among the draftsmen of Chicago. Through the instrumentality of Mr. H. L. Gay and the then president of the Chicago Architectural Sketch Club, Mr. W. G. Williamson, Mr. Clark presented \$1,000 to the club to be controlled by trustees, but used in any way they deemed would best carry out the purpose of the gift. The club, in conjunction with the trustees, at once formed the rules by which the competitions should be governed and magnanimously threw it open to the draftsmen of the country. The problem for this year should receive a strong indorsement through a large number of draftsmen being represented, and as the committee has announced, two additional bronze medals will be presented. The competition closes October 2 and work should commence now.

**Architectural
Superiority
of the Columbian
Exposition.**

While the attendance of architects at the late congress and the Columbian Exposition was large, it was not as general as those who know how great an architectural exhibition it is would expect from the profession. This may be due from several causes. The foreign journals copying from those published in the East have belittled the magnitude as well as the artistic merit of the Fair. The year has not been a prosperous one and many are waiting to visit Chicago at a later date, etc., but it is the expressed opinion of every architect who has spent a day at the Fair that no architect in the world should fail to see this great architectural triumph. In regard to the expressions, either published or otherwise, regarding the artistic completeness of the buildings, the general magnificence of the arrangement and range of perspective, there is only one class of detractors: those like the editor of the New York *Sun*, who has never seen the Fair and willfully misconstrues every report that is sent him. It is time that the profession and the artistic public should understand that the general view of the grand basin and the south lagoon has no equal in architectural composition on the face of the earth, and it is also the opinion of those who are most capable of judging and who make this statement, that nothing has ever existed that equals the general harmony and balance sustained by each part of the general composition. This is the judgment which foreign architects who cannot be suspected of bias, and whose architectural knowledge is beyond question, invariably give when speaking of this latest architectural creation. In fact, it is generally conceded that no description can portray or photograph present in any adequate degree the grand harmony of this architectural chorus. For it is not in the buildings, it is not in the sculpture, it is not in the perfection of the landscape architect's work that the spirit and distinctive superiority is found, but in the unity that exists in the general effect.

ARCHITECTURE AT THE WORLD'S COLUMBIAN EXPOSITION.

PART II.

BRITISH, FRENCH AND GERMAN ARCHITECTURE.

ARCHITECTURE, as an exhibit, while it is mainly prominent in the Exposition, state, foreign and concessionary buildings, is officially classed as Department K, from groups 139 to 144. These are the groups that make up the whole department of Fine Arts except "Exhibits from Private Collections." Hence the Exposition classes architecture as having a direct relation to all the other fine arts. The heading in the catalogue is "Architecture as a Fine Art." Hence we may assume that by placing the architectural drawings and designs in the Fine Arts building they are to be regarded as works of artistic design from one point of view and drawings of artistic execution from another.

It is difficult to look over this vast array of water colors, line drawings and photographs without a feeling of doubt as to the propriety of holding a competitive exhibition of architecture as a fine art at all. Works of painting and sculpture, not architectural, are final results, while all architectural drawings made previous to the erection of the buildings they represent are only means leading to results. It is easy to judge the former on their merits. But the latter are only projects which may be good or bad in execution according to the skill used by architect and builder in carrying them out.

All architectural exhibitions heretofore held, including the present one, have been of a mixed character. Even drawings made before execution are of many varieties. They are either perspectives in color, which are intended to show most correctly the proposed work; perspectives in monochrome or line, which only show the forms of buildings; elevations and sections which never show the resultant effect, but which are only the architect's tools, which assisted by his imagination may be sufficient for his purpose, but not for that of the spectator; or they may be photographs which show correctly the results without color. None of these are properly part of an architectural exhibition, which is only a means of bringing together the best representations of buildings that are impossible to be seen in one aggregation. Hence a true competitive exhibition of architecture as a fine art, collected in a building for works of fine art only, should consist of paintings executed from buildings or parts of buildings which have been erected; or colored drawings in perspective of projects that have not been executed. Each of these could be accompanied by plans, sections and models to further elucidate the design of each building, as has been done so extensively in the German section. To admit only these two classes of drawings with their addenda would make the work of judges comparatively easy.

But in addition to all the classes of drawings and designs that have been enumerated above there is still another, consisting of the works of what are known as "architectural artists." In many cases, especially in the American exhibit, the artist is given credit in the drawings as well as the architect or designer, and the same occurs in the catalogue. But in most of those the artist is made more prominent than the designer. Meretricious effects are often introduced which have nothing to do with a proper representation of the building in question, and the impressionist method of rendering has been found to have invaded the workshops of architects, with their own consent. There are pictures in the American exhibit, which are not exhibits of architecture at all, but only of methods of rendering by the artists who made them.

Taking these things all in all as we find them, one is almost overpowered by the wilderness of human work in this department that is presented to the eye. And when it is remembered that not by any means all of the architectural drawings are in the Fine Arts building, but that they may be found scattered among the foreign exhibits in the Manufactures building, in the foreign headquarters buildings, such as that of France, and even in the Transportation building in great quantity, it is a task to anyone to only glance at the great number of works of the architects of the world that are here collected. In one isolated building, that of the New York Central and Hudson River Railroad Company, is a complete exhibit of all classes of railroad architecture, the work of only one man, Bradford L. Gilbert, of New York, which is well worthy of examination.

But the architectural journalist impelled by a sense of duty must not miss all these things, even though to give any concep-

tion of what they are would fill several numbers of THE INLAND ARCHITECT.

The architectural exhibits in the Fine Arts building are confined to Great Britain, France, Germany and the United States, though Japan contributes four models which are a complete exposition of the ancient style and methods of building of that country. Great Britain sends 144 exhibits from 40 exhibitors, France 74 from 32 exhibitors, Germany 176 from 74 exhibitors and the United States 268 from 116 exhibitors. While the United States exceed each of the others in the amount of wall space covered, number of works and number of exhibitors, France, with 74 exhibits, covers more wall space than Germany with 176, and many times more than Great Britain with 144. In fact, Great Britain occupies only two alcoves, while France has at least eleven, and Germany eight. Yet England exhibits the designs of more individual buildings than either. This is a remarkable illustration of the methods of rendering architectural drawings by different nations. It would seem that no paper is large enough for a Frenchman, and that America is rapidly following his example. There is greater variety of rendering in the German drawings which comprise the largest as well as the smallest. There is a sameness in the method of rendering with the French, showing an adherence to the lines laid down in academic teaching. The English method of drawing is just what ours used to be twenty years ago before we were subjected to a French influence, such as every school of architecture established among us has endeavored to inculcate, no less than the many students who have been educated in the French schools.

England has never had a school of architectural design, since the days of Christopher Wren and his followers. It is the only one of the four countries here on exhibition in which there is no systematic or academic instruction in the art. There the system of apprenticeship has always prevailed, and all progress has been due to the influence and example of individual practitioners. This would be the case with us if it were not for the influence of the French school which is thwarting it. The great men of England have been recognized as such, if not always by the patrons of architecture, at least by the large following of younger men. Through the influence of a few, the Gothic revival of the middle of the present century came near to being a genuine revival. But it was killed by the performances of tyros and journeymen who, under the name of "Victorian," made it about as ridiculous as did the American fools under the name of "Eastlake."

Now we hear nothing of the so-called Gothic revival, but the memory of those men who did honest work in the true mediæval spirit still lives, and some of them are still with us, notably the greatest of them all, as shown by his example and influence, Alfred Waterhouse. But the students who are on the right track still look back to the work of the Pugins, and Sir Charles Barry, with whom the latter Pugin was associated in the grandest of modern architectural compositions, the new Houses of Parliament. Of later men they revere the memory of Street and Burges, the former the greatest student of the mediæval art of England and Italy, and the latter, the master of the thirteenth century work of France. And they always will, as shown by its outcroppings in the present exhibition.

It is well, therefore, that Waterhouse is represented in this exhibit, if by only two perspective drawings. But they give us two typical designs. While being a mediævalist he has always been the most versatile of the men whose leanings have been in that direction. And it is only such versatility as enables a man to adapt himself to all the varying circumstances arising in a long professional experience that prompts us to call him the greatest of them all. He has been confined to no special line of work, as has been the case with most of his compeers. First coming into notice through his success with the Manchester Assize Courts, his design for the town hall of the same city was adopted in competition against the best talent of Great Britain some years later. It is interesting to note here that one of the competitive designs over which that of Waterhouse was selected for the latter building is in the present exhibition. It is that of J. Oldrid Scott, son of the late Sir G. G. Scott, and familiar to us from the illustrations that appeared in the English journals at the time. Mr. Waterhouse has elected to send here a modest water color of a building of later date, but erected more than twelve years ago, the Natural History Museum, South Kensington. The celebrity given him by his two great works at Manchester has distracted attention, in this country

at least, from the equally famous building of which we are now enabled to see the autograph design. But the drawing is disappointing to one who has seen the building itself first. The great length and imposing size is not brought out, for it happens to be one which looks large, imposing and dignified from a distance, as is the case with Barry's Houses of Parliament. It is one of the first great buildings in England erected almost wholly of terra cotta outside and inside, but loses none of its dignity from being in that material. It is an example of the best modern mediævalism in design and construction, by its best modern exponent. Of the many business structures to which Waterhouse has given the stamp of genius, which has made them works of fine art, as well as models of practical adaptation and good construction, none are exhibited. His other contribution, the design for the National Liberal Club, on the Thames embankment, is of recent date, and shows how the Renaissance can be handled by a master in the art. Among the wilderness of business and hotel structures that have disfigured the city of London during the last twenty years, all assuming the forms of the Renaissance, but few have risen to mediocrity. Except in the designs of a few of the clubs, this style has had no able exponents. Scott's attempt at Renaissance, through government dictation, in the Foreign Offices, was a lamentable failure, compared with which the success of Waterhouse in a new style stands in strong contrast.

The English section is noticeable for a large number of works dating even before the Philadelphia Exposition, such as was not contemplated in the invitation to American exhibitors. It also contains three autograph drawings by the late George Edmond Street, two of which are of restorations. Here may be seen many of the designs for interior decoration by Professor Aitchison, and his drawing of the exterior of the Royal Exchange Assurance Company, Pall Mall, London. Aston Webb and E. Ingress Bell, recent successful aspirants, are represented by a colored perspective of the accepted design for the completion of the South Kensington Museum; also designs for the Victoria Courts, Birmingham, and the Metropolitan Life Assurance Societies' offices. Other designs offered for the South Kensington Museum are by John Belcher. Other noted exhibitors are James Brooks, London; R. W. Edis, who designed the British Headquarters building; Herbert A. Gribble, whose interior of the Oratory Church at Brompton is an exquisite drawing in color; Sir Thomas N. Deane & Son, Dublin; John L. Pearson and R. Phrené Spiers, of London.

The British exhibit is also remarkable from the fact that most of the drawings and paintings are autographic. The busy men of England still seem able to put their own handiwork upon their drawings, and the architectural artist is not a prominent factor there as with us. The only criticism to offer on the British exhibit is that too many of the drawings in pen and ink have evidently been made for reproduction by the photo-lithographic process, and are not appropriate in an international exhibition. But colored perspectives predominate. The English method of rendering is still, as it always has been, a representation of buildings as they are to look when built, without extravagant margins, elaborate frames or attempts at meretricious scenic effects. And that is why it occupies so little space.

(To be continued.)

PAINTING AND SCULPTURE AT THE WORLD'S FAIR.

TREATED AS "ART INSTRUCTED" AND "ART INFORMED."

BY H. C. PAYNE.

I HOLD first among the benefits of the World's Columbian Fair, the opportunity afforded through a rarely comprehensive Fine Arts Exhibit to reach some more catholic conclusions as to ultimate values both of aim and method.

With the world's current art before us, we may in a measure escape the insecure judgments resulting from a too exclusive familiarity with special methods, and conform our estimates more closely to the requirements of a universal standard, for in this air we breathe in this White World's City, not only school predilections, but even those innate predispositions which inhere in race and temperament, relax their grasp upon our spirits, and, freed for the moment from their own tyranny, the universal in them, more than the Anglo-Saxon or the individual, speaks.

Awake thus to the insufficiency of those distinctions in modern art based upon the varying methods of schools and cliques, and even of those deeper ones resulting from race and temperament, I

have sought one sufficiently broad to be aptly applied for purposes of interpretation not only to the art of one school and country but to that of all. Of course the application cannot be here exhaustively made. It will remain for the individual to whom the point of view offered commends itself to apply it to conclusions in the countless instances that cannot be here reviewed.

The world asks two things of art: that it interest, or that it move. It says to the painter and sculptor: your picture, your group must hold us by the intellect. It must excite wonder, admiration, surprise; or, reaching those more intimate sources of our being from which flow delight and tears, it must be felt. I shall here briefly treat of the painting and sculpture in the Fine Arts' building as it is related to these two requirements.

There are special sensibilities acquired through practice of, or familiarity with technical art. All in painting and sculpture that is approved by this *educated* sense, I designate "Art Instructed." All that appeals to the soul — either to that rare sense in it defined as esthetic, which demands that *spirit* of beauty which is the result of the observance of the deeper harmonic law, or to its simple human feeling — I designate "Art Informed."

Accepting this definition of the two terms, I think that there exists no single picture or group among the serious art of the Fair but may be grouped — and not arbitrarily — upon one or the other side of the broad line suggested, for while many productions meet either definition but imperfectly, and others seem almost completely to satisfy both, all will, I think, be found to acknowledge as master in the character of their first appeal one or the other of these two principles. For instance, while No. 143 in the Spanish exhibit, "Flevit super Illam," when considered as painting meets the fine requirements of a completely instructed art, we do not first *think* of it. We only *feel* it. Later we find in its execution a masterly adaptation, but its *spirit* speaks first to ours.

On the other hand, "Phryne," No. 94 in the Russian group, while interpreting well the free and joyous spirit of its Pagan theme, excites in us first admiration and surprise by its tremendous accomplishment. Sunlight and space are so perfectly rendered, harmony and spontaneity of line and grouping so well found, that we feel its illusion as a scene even more than its truth as an ideal.

Again, while it would be comparatively easy to select a group of works containing nothing more than the masterly execution characterizing the modern "Art Instructed," it would be difficult to find a considerable number of works that in spiritual quality of insight and sympathy well represented the "Art Informed" that were not at the same time good illustrations of an "Art Instructed." Thus it follows that the antithesis implied in the terms will not be always strongly marked.

The works in painting noted will be taken from the groups in oil, as most representative. Those in sculpture will be taken mainly from the French for the same reason — modern French sculpture preëminently, in instances ideally meeting the two requirements suggested.

It has been a question what method of presentation to pursue, whether it would be best to treat landscape, sculpture, and the "Art Human" (in painting) separately, or to follow the grouping already made. The latter method, as lending itself best to the convenience of the reader, has been selected. It has seemed also to meet equally well with the other the special purpose of this paper. I shall, therefore, consider the art by countries, only departing from this order in those instances where its strict observance would seem to hinder interpretation.

The picture in the Holland exhibit most perfectly representative of what is meant by the "Art Informed," is No. 74, "Alone in the World," by Jozef Israëls. Its interest as color, form, arrangement — in a word, as a scene, is so entirely subordinate to its human meaning, and this is so profound and so clearly felt, that we do not think of it as painting at all.

This is remarkable, so completely does it dispense with that exact self-consciousness of touch which characterizes most of the art with which we are familiar, and which has determined our standards of requirement in execution. That its unique manner does not hinder its appeal, indicates how little the *way* in which a thing is done has to do with art in its real, deep conclusions. Unhindered as unhelped by an execution that meets very imperfectly the requirements we make of technical art, it reaches direct to the very human heart of us. There is a treatment of life obtaining very much in English, Russian, and also in German art that holds the interest within the moment treated, and does not

permit the fancy to go outside of it. The anecdotal momentary quality resulting from this treatment, does not so much depend upon the character of the incident considered, as in the way in which it is treated, for the slightest thread of plot may suffice in the hand of a master to connect the superficial moment with the real existences concerned in it. In No. 2930, Jozef Israels', in the United States loan collection, the simple incident of an evening meal serves as a complete introduction to the people. It is not what they are doing, but themselves, that interest and hold us. The same is true of No. 190 and No. 349 in the German art, and of all pictures that consider their subjects first in their own character as human beings.

It is not, then, because people are engaged in a particular momentary action that a picture becomes anecdotal, it is because it is painted in such a way as to make the action itself more interesting than the people engaged in it.

Thus, while the simplest moment may be full of human opportunity for the artist, there are some that hold more than others.

Such a one as is selected in "Alone in the World," when fully treated as here, holds the whole life for us as for the soul that looks out at us desolate, its day past—its falling night. This is a profoundly significant picture in the deeper sense and may well be taken as a first example of the "Art Informed."

The naïveté of treatment found in the picture just noted, and existing to a degree that calls attention to itself in No. 75, "Fish-women," by the same artist, is eminently characteristic of this whole exhibit, and may be accepted as a means well adapted to the simple, homely themes treated, though it would be least adapted to the requirements of such works as Bonger's "Women at the Tomb," No. 337 (French), which depend for effect upon classic purity of line and form. This trait characterizing arrangement as well as brush treatment in this exhibit is so marked that I find in it little aptly illustrative of the modern painter's art as such. The pictures that hold us at all, hold us by their sympathy with the spirit of the simple phase or incident they treat, and those of their canvases which fail to reach the intimate secrets of their simple themes, as many of them clearly do, hold little as painting to compensate for this failure; whether, when the wave of protest against the current fallacy that to *do* well is enough in art shall have subsided, and our minds have reached their level, we shall accept as altogether satisfying an inexactness and looseness of treatment so opposed to the world's best *practice* even when accompanied by such rare insight and sympathy as here, is hardly a question. No. 25, "Washing Day," holds much of the same insight into the human opportunity of the simplest incident as No. 2,930, in the United States loan collection, before referred to.

In their landscape art I would mention No. 17, "Fall on the River," as most significant. It is filled with the spirit of the time and place. Nos. 18 and 19, by the same painter, though much slighter in their demands, are in the same close touch with the phase interpreted. Anton Mauve has also rendered with intimate sympathy the alluring quality of gray skies and gray-green fields. But sunlight also is tempting, and purple evening and moonlight pale or harvest golden. So say Innes, and Tryon, too, and *they* know—but *now* we would stay in gray fields under gray skies.

No. 148, "Sunset," is to my mind one of the most delicious landscape bits in the whole Fair, full to the brim with the spirit of the golden moment.

We find in the Spanish exhibit one of the most consummate works of art in the Fair. I mean No. 143, "Flevit super Iliam."—Christ weeping over Jerusalem. He stands surrounded by disciples on an eminence to the left. His attitude and gesture are expressive of profound yearning and sorrow. On the right, ascending, are others, all hanging in rapt, eager guise upon the utterance of the Master. Above his head is the day-star, while the full moon near the horizon mingles its faint gold with the paler dawn on still wall, and olive and vine-clad hill. It is a great thing in a canvas of such requirement to paint every subordinate effect and form in such a way that, while lending itself each in its own degree to the central purpose, it is yet, when observed for its own sake, found altogether satisfying.

This rare combination of completeness with concentration is here found, and I am filled with admiration at its masterly achievement, but even more am I thrilled by the significant and touching ideal which informs this still beauty of gracious line and still low harmony of tender color.

(To be continued.)

THE ORGANIZATION OF THE WORLD'S COLUMBIAN EXPOSITION.*

BY DANIEL H. BURNHAM, DIRECTOR OF WORKS.

I DO not know who first advocated the holding of a World's Fair on the four hundredth anniversary of the discovery of America by Columbus, but by the summer of 1889, New York, Washington, St. Louis and Chicago had organizations at work, each in the interests of its city. The one in Chicago started to raise money by subscription. It sent a well-known railway manager, Mr. E. T. Jeffery, and an engineer, Mr. Chanute, to examine and report regarding the French Universal Exposition then being held in Paris. It also elected a committee to report on sites and this committee invited the writer to consult with them, which he did during the fall of 1889 and the winter following. Very little was accomplished, as the chief interest then centered in the contest before congress by the cities interested in securing from the government the location of the exposition; but on April 9, 1890, the State of Illinois licensed the corporation, since known as the "World's Columbian Exposition," and on April 25 of the same year the national congress passed an act naming this city as the one within whose limits the Fair was to be held.

The act of congress provided for a national body, to be known as the "World's Columbian Commission," to which was intrusted the custody and care of exhibits and all communications with foreigners and exhibitors, and it also provided for the local corporation I have mentioned, to which was intrusted the designing and building of the Exposition, and the custody and care of it to the end of the Fair.

The National Commission organized and elected a president, a secretary and a director-general. The Illinois corporation also organized and elected a president and secretary and appointed various committees, among them that of Grounds and Buildings.

For the rest of the spring and during the first two summer months much time was wasted over the question of a site in Chicago; various committees from the corporation, the National Commission, the city authorities and the Illinois Central Railroad being engaged in the discussions, with little hope of a settlement. On August 20, however, the first real step in the right direction was taken, and the local corporation then retained as consulting landscape architects the firm of F. L. Olmstead & Co., of Brookline, Massachusetts. On September 2, thirteen days afterward, Mr. A. Gottlieb was appointed consulting engineer, and Messrs. Burnham & Root consulting architects. In the following October Messrs. Burnham & Root resigned, Mr. Root then being elected consulting architect and the writer being made chief of construction, all at one meeting.

These officers reported to the Grounds and Buildings Committee, which had "jurisdiction in all matters pertaining to grounds, leases, engineering, designs, plans, construction of buildings and works, maintenance of buildings and grounds, organization of guards, police, detective and fire departments, gas, electric lights, water supply, medical service, application for space, telegraphy, insurance, etc." The chief of construction was made the executive officer of the committee and the consulting architect, landscape architects and engineers were ordered to report to him.

Early in the fall of 1890 the two controlling bodies selected Jackson Park and the down-town lake front as what was called "The Dual Site," it being stipulated that the Fine Arts building, the Liberal Arts building and the Music hall should be kept "down town," and all other buildings be in Jackson Park. This decision was reached after a careful report of Olmstead & Co. of all the sites tendered, and upon the advice of all the members of the consulting board.

The South Park Commission leased Jackson Park and Midway Plaisance to the World's Columbian Exposition, and it was agreed between the parties: First, that the grounds should be cleared of all buildings and turned back to the commission on or before a certain date; second, that improvements made by the Exposition were to be as far as possible in the direction of the permanent improvement of the park.

The original designs of the South Park were made by Mr. Frederick Law Olmstead and Mr. Calvert Vaux about 1870. When, therefore, we took up the study of the grounds for the purpose of devising a plan for the Exposition, Mr. Olmstead's familiarity with the site and his superior knowledge of landscape effects caused us to be guided by him in general features. Mr. Codman, his partner, was a man well trained in all matters relating to the setting and surroundings of buildings. His training, both here and in France, his extensive travel, knowledge and natural aptitude fitted him to be both adviser and executant in this important work.

The general scheme of land and water was suggested by Mr. Codman. The arrangement of the terraces, bridges and landings was suggested by Mr. Codman after the architectural board had adopted a style for the grand court. The size and number of the Exposition buildings proper was determined from the schedule made by the Classification Committee, the order of the chairman of the Building Committee being to plan for structures covering about one-third more area than those in Paris in 1889. The shape and disposition of the buildings was determined by Mr. Root and myself, the engineer, Mr. Gottlieb, being, of course, consulted as well. While I mention the particular part in which each led, it is true that all of us consulted together on questions that arose, and

* Paper read before the World's Congress of Architects at Chicago, August 1, 1893.

nothing was finally determined upon which did not have the approval of all. Several tentative plans were rudely drawn on the cross-sectioned lithographed maps of Jackson Park, and a final one early in December, 1890, which was then adopted by the National Commission and the Illinois corporation, as the plan of the Exposition, though it only dealt with buildings immediately around the Grand Court, the Horticultural, Fisheries, and the Government space. This plan made no provision for state, foreign or women's buildings, for the Midway Plaisance, or the structures south of Machinery hall and Agricultural building. It was a suggestion, and it was not intended by us to present more than the mere central idea for the parts of the scheme then treated of. There was nothing original in it except the introduction of the canal, the lagoons and the wooded island; the grand court being the same arrangement as at Paris, with a water basin in the center and a dome at one end, in front of which was to be the great fountain. The plan was the work of us all. It was not due to an inspiration, but was thought out logically, step by step, keeping in view the immediate purposes of the Exposition, and the final treatment of the ground as a public park. It was a crude outline without suggestion of architectural treatment or style. In fact nothing was done or said as to the architecture proper, except idly and in a desultory way, Mr. Root at that time leaning to variety in style and color for the buildings of the Fair. On December 1, 1890, therefore, the status was as follows:

The Exposition was to be built on two sites, seven miles apart, and a sketch plan for part of one of them had been officially adopted. It was necessary to take charge of nearly seven hundred acres of land, the larger part of which was swampy; to design and build the Exposition and place the exhibits in two years and five months.

For this purpose it was necessary to quickly organize a competent force of architects, sculptors, painters, engineers, police, firemen, business men and clerks. Every moment was precious. It was out of the question for the firm of Burnham & Root to think of designing all, or any part of the buildings, because of the relations its members had already assumed toward the enterprise. I therefore drew up the following memorial to the Grounds and Buildings Committee, which my conferrees signed, at my request. It was sent December 9, 1890, to the Committee on Grounds and Buildings:

Preliminary work in locating buildings, in determining their general areas, and in other elementary directions necessary to proper progress in the design and erection of the structures of the Columbian Exposition has now reached a point where it becomes necessary to determine a method by which designs for these buildings shall be obtained.

We recognize that your action in the matter will be of great importance, not only in its direct effect upon the artistic and commercial success of the Exposition, but scarcely less upon the aspect presented by America to the world, and also as a precedent for future procedure in the country by the government, by corporations, and individuals.

In our advisory capacity we wish to recommend such action to you as will be productive of the best results, and will at the same time be in accord with the expressed sentiments of the architectural societies of America.

The following suggestions relate only to the central group of buildings in Jackson Park, it being the intention from time to time to designate other architects for the various important structures that are to be erected in addition thereto.

That these buildings should be in their designs, relationships, and arrangement of the highest possible architectural merit is of importance scarcely less great than the variety, richness and comprehensiveness of the various displays within them. Such success is not so much dependent upon the expenditure of money as upon the expenditure of thought, knowledge and enthusiasm by men known to be in every way endowed with these qualifications; and the results achieved by them will be the measure by which America, and especially Chicago, must expect to be judged by the world.

Several methods of procedure suggest themselves: First, the selection of one man to whom the designing of the entire work should be intrusted; second, competition made free to the whole architectural profession; third, competition among a selected few; fourth, direct selection.

The first method would possess some advantage in the coherent and logical result which would be obtained. But the objections are, that time for the preparation of designs is so short that no one man could hope to do the subject justice, even were he broad enough, to avoid, in work of such varied and colossal character, monotonous repetition of ideas. And again, such a method would invoke criticism, just or unjust, and would certainly debar the enterprise from the friendly coöperation of diversity of talent, which can be secured only by bringing together the best architectural minds of the country.

Second—The second method named has been employed in France and other European countries with success, and would probably result in the production of a certain number of plans possessing more or less merit and novelty. But in such a competition much time, even now most valuable, would be wasted, and the result would be a mass of irrelevant and almost irreconcilable material, which would demand great and extended labor to bring into coherence. It is greatly to be feared that from such a heterogeneous competition the best men of the profession would refrain, not only because the uncertainties involved in it are too great and their time too valuable, but because the societies to which they almost universally belong have so strongly pronounced on its futility.

Third—A limited and fair competition would present fewer embarrassments; but even in this case the question of time is presented, and it is most unlikely that any result derived through this means, coming as it would from necessarily partial acquaintance with the subject, and hasty, ill-considered presentation of it, could be satisfactory and the selection of an individual would be open to the same objections made above, as to a single designer. Far better than any of the methods seems to be the last.

Fourth—This is to select a certain number of architects, choosing each man for such work as would be most nearly parallel with his best achievements. These architects to meet in conference, become masters of all the elements to be solved, and agree upon some general scheme of procedure.

The preliminary studies resulting from this to be compared and freely discussed in a subsequent conference, and, with the assistance of such suggestions as your advisers may make, be brought into a harmonious whole.

The honor conferred upon those so selected would create in their minds a disposition to place the artistic quality of their work in advance of the mere question of emoluments; while the emulation begotten in a rivalry so dignified and friendly could not fail to be productive of a result which would stand before the world as the best fruit of American civilization.

(Signed)

D. H. BURNHAM, Chief of Construction.

JOHN W. ROOT, Consulting Architect.

F. L. OLMSTEAD & CO., Consulting Landscape Architects.

A. G. OLTGIEB, Chief Engineer.

This paper precipitated a heated debate. There were strong advocates for competition and the committee was solemnly warned

by some of its members against choosing by any other method; but finally, through a narrow majority, the recommendation was adopted. The committee then placed in my hands the selection of five architects to design the buildings around the great court. The rude plan I have spoken of showed two buildings where the Electrical and Mines now are, but their long axis run east and west instead of north and south, as at present. This arrangement would have left five buildings fronting on the great court instead of six, as is now the case. I selected five men, or firms, and the committee promptly confirmed them. I then sent to each of them the following letter:

The inclosed recommendation was approved last night by the Board of Directors of the World's Columbian Exposition, and in the same resolution they empowered the Grounds and Buildings Committee to secure the services of five architects to design the main group of buildings at Jackson Park.

The committee authorizes me to confer with the following gentlemen, namely: Richard M. Hunt, of New York; McKim, Mead & White, of New York; George B. Post, of New York; Peabody & Stearns, of Boston; Van Brunt & Howe, of Kansas City; with a view to your employment.

It is intended to place the problem in your hands as to the artistic aspects only—first, of the group as a whole; second, of the separate buildings.

The committee are disposed to leave the method of designing to the five architects, and you may determine among yourselves whether to make a joint design of the whole as one, or each to take up separate parts to be modified to meet such views as shall be expressed in your conferences from time to time.

This bureau will be expected to supply you with all data about materials, sizes, general disposition and cost of buildings, and it is also to have charge of the constructional features, and, finally, of the execution of the entire work, but with the understanding that the artistic parts are to be carried out with your approval, and that you are from time to time to visit the work either in a body or separately as may be determined wise. Our consulting architect, Mr. Root, would act as your interpreter when you are absent, without imparting into the work any of his own feelings.

I realize the hesitancy you may feel in assuming responsibility for design when you do not fully control the execution of it. The committee feel, however, that strict economy of the two essentials, time and money, will be best subserved by keeping the actual control of the work in the hands of one man and his bureau; and I can assure you that your intents and purposes of design, once agreed upon by the committee, shall be carried out as you wish, and that they shall not be altered or meddled with, and when exigencies arise, making any important change necessary, you shall be consulted and have the matter in charge the same as in original design.

I will be pleased to hear from you by wire, if you think favorably of this proposition. I shall be here until Monday evening, and unless detained shall be in New York city Wednesday next, stopping at the Windsor. As in a personal interview it will be possible to make matters much more plain, I hope to find a note saying that I may have the honor of seeing you. Those who accept should make a preliminary visit here together as soon as possible.

Yours very truly,

(Signed)

D. H. BURNHAM,
Chief of Construction.

This brought the time up to within a week of Christmas, 1890.

On December 22 I met in New York, Messrs. Hunt, Post, Peabody and Mead, and secured an agreement from them, and by telegram from Mr. Van Brunt, that they would visit Chicago together on the 10th of January following. On my return to Chicago the Grounds and Buildings Committee authorized me to select five architects from Chicago to design the other great structures of the Exposition. The men nominated and promptly confirmed were Burling & Whitehouse, Jenney & Mundie, Henry Ives Cobb, S. S. Beman and Adler & Sullivan. I called on each of them the next morning and obtained acceptances.

The architects met in the office of Burnham & Root, on Saturday, January 10, 1891, there being present: Consulting Architects Olmstead and Codman, Consulting Engineer Gottlieb, Richard M. Hunt, of New York, Robert S. Peabody, of Boston, George B. Post, of New York, William R. Mead, of New York, Henry Van Brunt, of Kansas City, Dankmar Adler, of Chicago, Louis L. Sullivan, of Chicago, F. M. Whitehouse, of Chicago, S. S. Beman, of Chicago, Henry Ives Cobb, of Chicago, W. L. B. Jenney, of Chicago, and myself. Mr. Root was absent from the city, but arrived during the afternoon in time to meet those present and be introduced to those he was not acquainted with. An organization was effected by the selection of Mr. Hunt as chairman and of Mr. Sullivan as secretary, and an adjournment was taken until Monday. That night a banquet was given by the Grounds and Buildings Committee to the architectural board, at University Club.

On Monday the board met, but Mr. Root was missing. At noon word came of his illness, which terminated fatally on Thursday afternoon. Mr. Root possessed a mind remarkable for its artistic insight, quickness and clearness of apprehension, and deep sympathy with everything of value about him. Though filled to running over with his own suggestive thoughts he never failed to grasp another's, and it was his everyday custom to coöperate the elements of discussions with a rapidity and finish that seemed marvelous. His very visions were as real to him as the actual objects of life are to the eyes of other men. He saw comprehensively and exactly, both through his natural eyes and those of his spirit, and his power of expression to the ears, the eyes or the hearts of others kept pace with his own vivid impressions. I cannot, of course, believe that the architecture of the Exposition would have been better had he lived, but it certainly would have been modified and stamped with something of his great individuality. My own loss I cannot speak of. Our relations had been intimate and even fond, from the week when first we met. We had lived together for eighteen years without a written agreement or a quick word between us. When he died, I remained with the Exposition only in deference to the judgment and wishes of my friends among the directors.

The discussions of the board extended through the week after the death of Mr. Root, the plan being modified by important changes, and at the end of the meeting I apportioned the work among the men as follows:

F. L. Olmstead & Co., landscape architects.

Richard M. Hunt, Administration building.

Peabody & Stearns, Machinery hall.

McKim, Mead & White, Agricultural.
 George B. Post, Manufactures and Liberal Arts.
 Van Brunt & Howe, Electricity.
 S. S. Beman, Mines and Mining.
 Adler & Sullivan, Transportation.
 Henry Ives Cobb, Fisheries.
 Burling & Whitehouse, Venetian Village.
 W. L. B. Jenney, Horticultural.

This was only twenty-one months before the date set by congress for the dedication of the completed grounds and buildings of the Exposition. The work done by the board in its January meeting was: First, confirmation of general scheme; second, settling exact sizes of court and causal; third, settling exact size and location of Agricultural building, Manufactures building, Electrical building, Mines building, Fisheries building, Horticultural building, Administration building, Machinery building, Transportation building, Venetian village; fourth, the height of cornice around the main court; fifth, the approximate height of terraces above datum.

On February 20 the board met again, this time Mr. McKim coming instead of Mr. Meade, and the New York members being accompanied by Mr. Augustus St. Gaudens, the sculptor, who was retained as adviser. They then brought with them the rough sketches, each of his own building, and the landscape architects brought a full scale plan of the grounds of Jackson Park, extending from north of the Fisheries building to south of Machinery hall.

The following week was one of interest to all the conferrees. Mr. Hunt presided in the meeting. Each designer displayed his sketches upon the wall, explaining the purpose and intent of his work, and submitting to the kindly criticisms of all the others. The Grounds and Buildings Committee spent a day in a room, where every design was carefully explained to them by its author; afterward the proper officers of the National Commission also met the architects, when the same process was gone through again. The whole work was then formally passed upon and adopted by the World's Columbian Exposition and the World's Columbian Commission, and this memorable meeting came to an end late in February, 1891. One of the most eminent artists who had been present at all of the meetings, on parting, remarked: "This has been the most important artistic moment of my life." The sentiment so expressed was echoed by everyone present. Then for the first time one could commence to form an idea of the architecture which we are now familiar with. The strongest enthusiasm prevailed, and a high sense of the importance of the work dawned upon us.

During January, when the main plan of the work had been approved, the chief engineer let a contract for the excavation of the basin, lagoons and inlets, and while the architects were here in February the work commenced.

After the adjournment, it was determined by the Grounds and Buildings Committee to select an architect for the Woman's building by competition, to be confined strictly to women. Twelve sets of sketches were submitted for the day appointed, and three prizes were given; the first to Miss Sophia G. Hayden, of Boston, the second to Miss Lois Howe, of Boston, and the third to Miss Laura Hayes, of Chicago. Miss Hayden was at once employed as the architect of the building, and since then has made the designs and overlooked the construction of the building. Examination of the facts show that this woman had no help whatever. The design was made by herself in her own home.

This brings the history of the enterprise down to about March 1, 1891. At this point, for the first time, the chief of construction was enabled to form an estimate of the work to be done. Roughly speaking, it consisted of reclaiming nearly seven hundred acres of ground, only a small portion of which was improved, the remainder being in a state of nature, and covered with water and wild-oak ridges, and in twenty months converting it into a site suitable in substance and decoration for an exposition of the industries and the entertainment of representatives of all the nations of the world. On its stately terraces a dozen palaces were to be built—all of great extent and highest architectural importance—these to be supplemented by two hundred other structures, some of which were to be almost the size of the Exposition buildings themselves; great canals, basins, lagoons and islands were to be formed; extensive docks, bridges and towers to be constructed. The standard of the entire work was to be kept up to a degree of excellence which should place it upon a level with the monuments of other ages. The opportunity for gaining honorable distinction, however, made the duty of choosing men for the force comparatively easy, and in a very short time after the plans were finally adopted the following were on the field of action, working with one object—the welfare of the great enterprise:

Charles B. Atwood, designer-in-chief.
 William Pretymann, director of color.
 E. G. Nourse, general engineer.
 Frederick Sargent, electrical engineer.
 J. C. Slocum, mechanical engineer.
 Wm. S. MacHarg, sanitary and water engineer.
 John W. Alvord, engineer of grades and surveys.
 Ernest R. Graham, assistant chief of construction.
 Rudolph Ulrich, landscape superintendent.
 Dion Geraldine, general superintendent.

Later the following changes occurred: Mr. Frederick Sargent assumed entire charge of all mechanical plants, Mr. Slocum going out and Mr. R. H. Pierce becoming electrical engineer, and in March of this year Mr. Sargent withdrew, leaving Mr. Charles F.

Foster in charge as mechanical engineer, where he still remains. Mr. Gottlieb, the chief engineer, withdrew in the summer of 1891 and Mr. Edward C. Shankland took his place. Mr. W. H. Holcomb has since joined the force as general manager of Transportation. Mr. Pretymann resigned in May, 1892, and Mr. Frank D. Millet took his place. Col. Edmund Rice of the United States Army assumed control of the Guard in May, 1892. Marshall Edward Murphy took charge of the entire fire department in December, 1892, taking the place of Mr. A. C. Speed, who had been in charge until then. Mr. C. D. Arnold was made official photographer. Dr. John E. Owens was made medical director. Mr. Atwood came out to join me in my private practice in the spring of 1891. The needs of the Fair were so great he assumed the place of designer-in-chief instead.

The Venetian Village being abandoned, and it having been concluded to place the Music and Fine Arts buildings in Jackson instead of in the down-town park, Mr. Whitehouse was urged to design the Fine Arts Palace, but severe illness at the time prevented him from doing it. This building then went to Mr. Atwood. When the Venetian Village on the end of the pier in front of the Grand Court was abandoned, Mr. St. Gaudens suggested the thirteen columns as shown on the earlier plans of the work; but this being finally deemed to be inadequate, the Music hall, Peristyle and Casino, as one composition, was entrusted to Mr. Atwood, and then Mr. Whitehouse also took up the very important work of designing the Festival hall.

The following buildings have been erected in Jackson Park and Midway Plaisance. Those built by the Exposition, as follows: Administration, Machinery hall and Boiler house, Pumping station, South Colonnade, Agricultural building, Forestry building, Dairy building, Freight houses, Convent of La Rabida, Stock ring, Company's shops, Company's barn, Sewage Cleansing works, Landscape Propagating house, Tank house, Sawmill, Peristyle, Music hall and Casino, Manufactures and Liberal Arts building, Electricity building, Mines and Mining building, Transportation building and Annex, Terminal station, Grounds and Buildings headquarters, Photographic building, Horticultural building, Horticultural greenhouses, Woman's building, Fire and Police houses, Fisheries building, Mechanical offices, Art building, City Police stations, Woodlawn and Hyde Park, Art Institute (downtown), Leather building, Silos, Model building, Stock barn, Customhouse, Choral Music building, Entrances, Music stands, Perron and sheds, Sheds for empty cases, Children's building, Public Comfort building. These buildings aggregate 6,500,000 square feet.

The following states have built headquarters: Illinois, California, Colorado, Washington, South Dakota, Nebraska, North Dakota, Kansas, Texas, Utah, Iowa, Montana, Kentucky, Florida, Arkansas, Minnesota, Missouri, Louisiana, West Virginia, Pennsylvania, New York, Maryland, Delaware, New Jersey, Rhode Island, Massachusetts, Vermont, Connecticut, New Hampshire, Maine. The state buildings occupy over 40,000 square feet.

The following foreign governments have built: Great Britain, Canada, Russia, Germany, Ceylon, France, Turkey, Hayti, Norway, Sweden, Brazil, Nicaragua, Colombia, Guatemala, Costa Rica, Japan, Venezuela, New South Wales, Spain and East India, covering an area of over 300,000 square feet.

The following concessionaires have built: Bedouin Encampment, Lapland Village, Ostrich Farm, Dahomey Village, Brazilian Concert Hall, Chinese Village and Theater, Algerian and Tunisian Bazaar, Japanese Bazaar, Dutch Settlement, German Village, Street in Cairo, Ferris Wheel, Volcano of Kilauea, Captive Balloon, East Indian Village, American Indian Village, Hungarian Café, Austrian Village, Persian Concession, French Cider Press, Ice Railway, Biffel Tower, Natatorium and Vienna Bakery, Japanese Bazaar, Irish Village, Irish Industries Village, United States Submarine Diving Company, Log Cabin, Reproduction of St. Peter's, Moorish Palace, Libby Glass Company, Turkish Village, Hagenbeck's Animal Show, Panorama of Bernese Alps, Venice-Murano Glass Company, Merck Drug Exhibit, Café de Paris, Electric Scenic Theater, Adams Express Company, International Dress and Costume Company, Workingman's Home, Diamond Match Company, Clam Bake, Walter Lowney Chocolates, Walter Baker Cocoa, Van Houten Cocoa, Japanese Tea House, Great White Horse Inn, Puck Building, White Star Steamship Company.

They will aggregate over 1,100,000 square feet. The total grand area of the buildings in the Fair is something less than two hundred acres.

The artists engaged on the decorations are: Melchers, McEwen, Blashfield, Reinhardt, Simmonds, Reid, Shirlaw, Cox, Beckwith, F. D. Millet, Earle, Garnsey, Maynard, Sullivan, Dodge, Armstrong, Turner, Weir, Coleman, Louis Millet and others.

The sculptors are: French, Potter, Mead, Martiny, Waagen, Bitter, Rohl-Smith, Proctor, Taft, Yandell, Rideout, Boyle, Bock, Pratt, Baur, Blankenship, McNeill, Momys, Kraus, Galert, Warner, St. Gaudens.

I cannot, in this paper, describe the works, or tell you the amounts of material which have gone into construction. This must be done in an official report, which will take many months to prepare. I can, however, tell you how, during the storms of summer, the frosts of winter, all day, all night, week in and week out, for two years, the little band of American boys ran the race for victory with Father Time and won it. Without looking for, or expecting compensation at all equal to the services they have rendered, without jealousy, with ready willingness, these men have been ever to the front, emulating each other in the amount and quality of the services to be rendered. Though I cannot now

pick individuals to be praised, I can congratulate all on the glory they have won through constancy and self-sacrifice, such as no other country ever gained from her sons in time of peace. They have showed, what to me is the greatest heroism, that of forbearance and constant helpfulness. I am most proud of having been associated with them.

THE CONSTRUCTION OF THE BUILDINGS, BRIDGES, ETC., AT THE WORLD'S COLUMBIAN EXPOSITION.*

BY E. C. SHANKLAND, CHIEF ENGINEER.

WHEN Mr. Burnham, in March, 1891, ordered the constructional plans of the Exposition buildings to be made, the nature of the soil of Jackson Park as regards its bearing capacity was practically an unknown quantity. The first step therefore was to determine by borings and loading tests the nature and capacity of the soil.

Borings.—Over two hundred borings were made on the site of the main Exhibition buildings, and the soil was found to be as follows:

	Fill.	Black soil.	Sand.	Soft Sand.	Clay.	Hard Pan.
Art building .....	.....	0.5	1.0	13.0	15.5	27.0
Fisheries .....	.....	3.7	.....	12.0	.....	14.5
Government .....	.....	1.9	1.6	13.0	16.0	28.0
Manufactures, north half	1.0	1.0	1.2	13.0	13.0	25.2
Manufactures, south half	1.4	2.7	1.3	10.4	11.0	22.8
Agricultural, northeast half	1.5	2.1	2.0	5.0	23.0	28.0
Agricultural, southwest half	2.2	3.1	1.1	12.6	13.5	27.0
Machinery hall	2.2	1.0	1.8	10.0	16.0	27.2
Administration .....	.....	.....	3.0	12.0	9.0	20.0
Electricity and Mines .....	.....	0.5	5.5	11.0	13.0	25.2
Transportation .....	.....	0.5	4.5	11.0	8.5	17.5
Woman's building .....	.....	3.0	0.5	13.5	3.0	12.0

Or, to put it concisely, this was an average of 1 foot of black soil, 2 feet of sand, 11 feet of what was called in the reports quicksand, but which is not a true quicksand, but simply sand saturated, or partly saturated, 13 feet of clay, generally soft, and then hard pan at an average depth of 27 feet.

Loading Tests.—Loading tests were made to determine how much it was safe to put upon the soil per square foot, also whether the soil would squeeze out under pressure, as most of the large buildings were designed to stand close to the lagoons.

Under a load of one ton per foot for forty-eight to sixty-four hours the settlement was found to be from $\frac{1}{8}$ inch to $1\frac{1}{4}$ inches, everywhere, except in the swale spoken of below. A test was made twelve feet from the lagoon at what is now the northeast corner of Electricity building. A platform four feet square was laid on natural ground, simply leveled off. On this platform twenty-two tons were placed a load of 2,750 pounds per square foot. It remained fifteen days, with a settlement in that time of $\frac{1}{4}$ inch. On the fifteenth day a trench four feet away from the platform was dug 3 feet wide and down to the soft sand. In forty-eight hours the platform went down $\frac{1}{8}$ inch, but no further settlement was detected after that.

Loading tests which were made later in the summer showed as follows: At the north end of Manufactures building, under a test of seventeen tons on nine square feet the first forty-eight hours the ground settled $\frac{3}{8}$ inch; in seventy-two hours, $\frac{1}{2}$ inch; no change after this.

The soil at the south end of Manufactures building, in the swale spoken of below, with 3,161 pounds per square foot, on a base 3 feet by 3 feet 1 inch, showed a settlement of 8 inches while loading, and in ninety hours had settled 38 inches. It was still settling, but the test was stopped at this point.

In the Agricultural building, in this same swale, with approximately the same load per square foot, a settlement of 14 inches in 144 hours was found.

At the south end of Stock Pavilion the settlement in 144 hours was 8 inches.

In the south end of Transportation building in 120 hours, with the same load per square foot, the greatest settlement was $2\frac{1}{4}$ inches.

At the south end of Government building, with a load of 3,700 pounds per square foot, the settlement in twenty-four hours was $\frac{1}{2}$ inch. Load was kept on ninety hours, but no further settlement occurred.

Spread vs. Pile Foundations.—It was considered safe from this showing to use spread foundations, which made a saving of about \$6,000 per acre over using piles. These spread foundations were made of a cribwork of timber resting on plank and supporting the posts of the building.

Muck Swale.—A crescent-shaped swale of muck, spoken of above, probably the bed of an old creek, was found with one arm extending from the east center of the Manufactures building, running southwest and crossing the present basin a little in front of McMonnies' fountain, then turning southeast and running through the northeast portion of the Agricultural building. This made it necessary to pile practically the south half of the Manufactures building and the northeast portion of the Agricultural building.

Foundations, Manufactures Trusses.—When the trusses over the court in the Manufactures and Liberal Arts building were designed their foundations were made of piles with a timber grillage on top. These pile foundations were designed to take care of

the extra thrust of the arches due to wind, the tie rods between the feet of the arches being designed to only take care of the thrust from dead load.

Foundations, Art Building. Other Foundations.—The foundations of the Art building were made of concrete. All the other foundations of the buildings, including Machinery hall, were made spread.

Construction Designed in Mr. Burnham's Office.—It was understood that the architects furnishing plans of the buildings should not be made responsible for the construction, and should not be called upon to make any constructional plans; accordingly all the construction, both in wood and iron, was designed in Mr. Burnham's office. The only exception was in the Mines building, when Mr. Beman showed the cantilever trusses, and they were built in compliance with his desire. They are interesting as adding another type to the variety of trusses in the park, although they are not at all economical.

Economy in Construction.—The object sought in the construction of the buildings was the greatest economy consistent with perfect safety. To this end the buildings, as at first designed, were almost entirely wood. The trusses, with the exception of the Mines building, were wood, or combination.

The domes in the Manufactures building, as then designed; in the Horticultural and Administration buildings, were steel from the ground up, and in the Agricultural and Fisheries were steel tops, the lower portion being of wood. Later it became evident that true economy demanded the use of more iron in the construction, and when, from the desire to get more space, and other reasons, it was determined to roof over the court in the Manufactures building, thus doing away with the dome first talked of, it was decided to make this of one span. The court of the Electricity building was also roofed over with steel trusses. The trusses and domes of Machinery hall, the construction plans of which were begun about this time, were also made of steel.

Variety of Trusses and Details.—The very different buildings of necessity brought out a great variety of trusses, and a multitude of new details. Some of the trusses, while theoretically correct, were found to be practically bad. For instance, the bowstring trusses in the curtain of the Horticultural building were designed with the upper chord made of boards nailed together. The drawings called for them to be extra nailed, and the contractor claimed he took extra precautions, but when he came to adjust them it was found that the boards would slip past each other, and the chord flattened under the pull of each rod.

In the Forestry building the trusses were all made of wood, wooden pins being used instead of nails. In many cases it was found impossible to properly brace against wind pressure without making use of the sheathing on which the staff was to be nailed. It was, therefore, laid diagonally. This was notably the case in the towers of the Electricity building, where 2-inch sheathing was laid diagonally, and the number of nails in the ends of each plank was specified.

Loads on Soil.—The maximum load placed on the soil in all the buildings throughout the park was 2,500 pounds per square foot. This included live and dead load, and the vertical component of the wind pressure. When piles were used, the load per pile was from 10 to 15 tons, the latter being the maximum used. The contractors were not required to put foundations below frost line; simply to remove whatever black soil or fill there might be, and get a level bed on the sand.

Floor Loads.—The main floors of all the buildings, except Machinery Hall and Mines building, and those parts of the roofs used for gardens or restaurants, were figured for 100 pounds per square foot, live and dead. Machinery hall floor was figured for 250 pounds per square foot, and Mines building for 150 pounds. The galleries of all the buildings were figured for 80 pounds per square foot. Roofs were figured for 40 pounds per horizontal square foot, or 25 pounds vertical load, and 20 to 30 pounds with pressure, depending on the exposure of the building. The method giving the greatest result was used. Purlins and jack rafters, 30 pounds per square foot.

Unit Strains.—The bridge builders' standard specifications were used for all the ironwork, except the Manufactures' trusses. At first 1,500 to 1,800 pounds fiber strain was used for white pine, tension up to 2,000; bearing perpendicular to fiber, up to 800 pounds. It was decided during the progress of the work that these strains were all too high, inasmuch as they called for a quality and an inspection of lumber which could not be obtained. The matter was gone into exhaustively, and a careful study made of the recent tests on timber made by the United States government at Watertown; also those made by Professor Lanza, of the Massachusetts Institute of Technology, and the following unit strains were adopted for white pine, yellow pine and oak being allowed thirty-three to fifty per cent more: Fiber strain, 1,200 pounds; this not to be exceeded in any case. Bearing perpendicular to fiber, 300 pounds, shear with grain, 100 pounds; bearing on end of timber, 800 pounds; compression, when ratio of length to least side of cross-section did not exceed 10,800 pounds; 10 to 35, 600 pounds; over 35, 400 pounds.

Experience has proved that these strains are not too low. In the case of the large tanks of the Sewage Cleansing works, the assistant engineer who figured out the sizes of timber to be used disregarded the standard unit strains, and allowed a pressure of nearly five hundred pounds on the 8 by 10 inch white pine ring supporting the whole weight of the tank. This 8 by 10 inches has crushed in over $\frac{3}{4}$ of an inch. In two cases in Machinery hall foundations the wood was indented about $\frac{1}{4}$ of an inch under a

*Paper read before the World's Congress of Architects at Chicago, August 1, 1893.

load of less than three hundred pounds. These are the only instances which have been noted.

The arches over the court of the Manufactures and Liberal Arts building were figured for a vertical load of 42 pounds, made up as follows: iron 20, roof 10, snow 12. A recalculation made after the roof was completed, taking shipped weight of iron, showed weight of iron on straight part of roof to be 22½ pounds; roof 8 pounds, leaving 11½ pounds for snow. The arches were also figured to withstand a wind pressure of thirty pounds per square foot, acting horizontally against the wooden structure which surrounds the court, concentrated at that point of the arch where the combination truss is connected to it. It amounted to 90,000 pounds at this point, seventy-six feet above the bottom pin. In addition to this a wind pressure of thirty pounds per square foot was taken, acting at an angle of twenty degrees with the horizon, extending over the whole roof. For the combined strain from wind, dead and snow load, the unit strain was taken at 30,000 pounds per square inch. The connections, however, were made fifty per cent stronger than this. The specifications sent to bidders on these arches called for either Bessemer or open-hearth steel not to contain over .08 of 1 per cent of phosphorus; to have an ultimate strength of not less than 66,000 nor more than 74,000 pounds, with an elastic limit of not less than 37,000 pounds; an elongation of not less than sixteen per cent in eight inches, and a reduction of not less than twenty-five per cent at point of fracture.

Over 3,500 tests of this material were made by Messrs. Estrada, Kenyon & Gray, the inspectors, with the following average results: Elastic limit, 40,000 pounds; elongation in eight inches, twenty-seven per cent; reduction at point of fracture, fifty-seven per cent. The unit strain of 30,000 pounds is higher than has been used before, and it was severely criticised in the early stages of the construction; however, it was put at that figure after a thorough study of all the conditions involved, and as it represented a saving of \$75,000 to \$80,000 over the strains used heretofore, the writer feels that he was justified in adopting it.

Bridges.—The only difficulty found in designing the bridges was the fact that the fire boat had to go under, and the fire engines, and in two cases a railroad track, over them. The clearance demanded for the fire boat and launches made the floors steeper than they otherwise would have been. The three canal bridges—that is the ones at the northeast and southeast corners of the Electricity building, and the one from Machinery hall to Agricultural building—are plate girder cantilevers, with three openings, center opening fifty-four feet, and two side openings thirty-one feet. This system was made necessary by the shallow depth allowed for the ironwork and the floor. Each bridge is sixty feet wide, and is made of seven plate girders, connected by bracing, having the joists resting on shelf angles just below the top flange of each girder. The two south bridges carry railroad tracks, and the two plate girders under each track were made heavier, and ties used instead of joists. The two bridges at the Peristyle are wood; all the balance are iron, made of three or four (depending on width of bridge) curved lattice girders. The floor was constructed similarly to the canal bridges.

Interior Docking.—The docking around the interior waterways was made, where the banks were high, of a row of piles faced with a sheet piling made of two thicknesses of 2-inch plank. This row of piles was tied back by iron rods to a row of anchor piles. The piles and lumber used in this docking, as well as the piers, were all soft wood, the only requirements in the piling specifications being that the piles should be 10 inches in diameter at center, and be able to withstand the blows of the hammer.

Piers.—The first pier built at Jackson Park was a T-shaped pier, with a breakwater some distance away on the north and east, on the site of the present Casino Pier. This was afterward taken out, and the present pier, 2,400 feet long and 250 feet wide, built. The breakwater of this pier was made part of the pier, extending along north side and east end. The breakwater was made of two rows of close-driven piles, held together with iron rods and filled with stone, increasing in width with the depth of water. The balance of the pier was made of piles, fourteen to sixteen feet centers each way, capped with 12 by 12 timber; these caps carrying the joists and floor. Mooring piles are placed about three feet inside from the edge of the pier, securely braced, but not carrying caps or joists. The Fifty-ninth street pier is similar in all respects to the Casino, as is the Van Buren street, with the exception that the latter has no stone breakwater.

Costs.—The cost of the arches over the court of the Manufactures and Liberal Arts building was \$1.10 per square foot of ground covered. The cost per square foot of the whole building, including decoration, was \$1.39; Transportation building, including sculpture and decoration, \$1.08; Electricity building, \$1.69; Machinery hall, \$2.12; Agricultural, \$1.44; Administration, \$9.18; Van Buren street pier, 21 cents; Casino Pier, 21 cents; Breakwater, Casino Pier, \$1.80; Horticultural, \$1.41; Mines and Mining, \$1.04; Fisheries, \$2.35; Forestry, 75 cents.

As one of Mr. Burnham's staff I cannot close this paper without paying a tribute to our chief.

You all know of the personal sacrifices he has made for this work; of his untiring energy, and his constant devotion to the interests of the Exposition, and you also know of his masterly executive ability. But you may not recognize what a tower of strength he has been to those who have been associated with him as members of his staff. His grand courage has always been an inspiration to us. If we had doubts; if we were discouraged; if, as often happens in any great enterprise we felt like throwing up

the sponge, we had only to turn our eyes to him and gain new strength and new encouragement from his undaunted spirit. He always led as a true leader should. If he asked us to work until two in the morning he was sure to be at work with us, and worked longer and harder. His loyalty to his staff was so consistent and so unchanging that each of us felt he had the perfect trust and confidence of the chief. This loyalty has been our greatest stimulus and our greatest support at all times and in all difficulties. He is indeed the man who built the Fair.

TWENTY-SEVENTH ANNUAL CONVENTION AMERICAN INSTITUTE OF ARCHITECTS.

THE twenty-seventh annual convention of the American Institute of Architects was, like the meeting of last year, held in Chicago, and, like it, very little except the usual routine business was transacted, it being deemed more important that the architects should spend as much time as possible at the Fair.

The convention opened on Monday, July 31, at 10 o'clock, in the Art Institute building, Chicago, President Edward H. Kendall, of New York, in the chair.

After an address of unusual elegance and merit by the president, in which the work of the year and particularly that in which the president and the New York Chapter had participated, had been delivered, Secretary Alfred Stone, of Providence, Rhode Island, read the report of the board of directors, as follows:

REPORT OF BOARD OF DIRECTORS.

The meeting of the Institute in annual convention in midsummer, for the purpose of conforming to the date fixed for the Auxiliary Congress of Architects from all parts of the world, in connection with the World's Columbian Exposition, makes our year a very short one, and prevents as full an attendance of its members as could be desired.

At the first meeting of the Board of Directors the resignation of our former secretary, Mr. Dankmar Adler, who had brought to the work that energy and insight for which he is distinguished, made it necessary for the Board of Directors to elect someone in his place, and it was not until a month after the opening of the year that his successor was able to assume the duties of the office.

There has been, during the year, no marked events to chronicle, except that crowning event in the architectural history of this country, which has brought us to this city at this time, and which will be properly noticed in fitting terms at another stage of our proceedings. No new Chapters have been formed and there has been no marked increase in the membership. In fact the increase is less than we ought to look for, in view of the importance to every member of the profession of the work which the Institute has done in the thirty years of its existence to promote the best interests of the profession and to elevate its tone and the standard of professional practice. Seven members have been elected and five names are to be at once balloted for, having been approved by the Board at its meeting held here in Chicago on the 30th inst.

To what is it due that we do not attract a larger constituency? Why are so many of the strong men in the profession outside of our organization? Is it the independent spirit of Americans? Is it because of the not wholly satisfactory relation of the Chapters to the Institute? Or is it simply the indifference which comes from absorption in a most engrossing profession, and which allows itself to reap the advantages of the conditions without any effort to shape them?

The question of the relation of the Chapters to the Institute requires your attention as well as that of the Board of Directors, but before any changes are made great care should be taken to make sure that the changes proposed are likely to be beneficial or otherwise. It is undoubtedly true that the condition requiring a person to be a member of a Chapter before he can be a member of the Institute has its drawbacks, but it is respectfully suggested that the matter of dues to the Chapters be so arranged that those who cannot partake of all its benefits should be required to pay less than those who do. It seems to the Board of Directors that the dues of the Institute are not burdensome compared to the benefits which every member indirectly receives, even if he fails to see its direct value.

The matter of the bill to regulate procuring designs for buildings to be erected under the Treasury Department of the United States Government has been so fully treated by the President in his annual address that it is unnecessary for the Board to say more than that it looks to the Secretary of the Treasury and the present incumbent of the office of Supervising Architect to see that the bill is faithfully carried out, and from the assurances of the latter we do not believe that we shall be disappointed, unless there is some radical defect in the law. If that is the case, the near approach of a session of congress will give opportunity to amend it. In order to preserve a complete history of the Institute it is recommended by the Board of Directors that its Executive Committee be empowered to arraign with Mr. A. J. Bloor, who was for so many years its secretary, and who is more familiar with its history than any other person, to compile and write the same and to pay him such sum of money as may be agreed upon, not exceeding \$1,500.

Since the last annual meeting the Institute has lost by death three of its active members and four of its honorary members. The deceased Fellows were: J. H. Kirby, who died January 28, 1893; J. B. Woodworth, Worcester, Massachusetts, and Pierce P. Furber, member of the Board of Directors for three years, and of the St. Louis Chapter, who died April 6, 1893—within a few weeks of his fortieth birthday. Mr. Furber brought to the practice of his profession a strong and active body, a well-poised mind, a keen intellect and uprightness of purpose, and large professional attainments, which won for him many firm friends, the confidence of his partners and clients and the good will of all who were brought in contact with him.

Of the honorary members Henry Sargent Codman was so closely allied by his practice, his friendship and his connection with the architectural treatment of the grounds of the Columbian Exposition that we all regarded him more as a fellow member of our own profession than as one outside of it, and it was a delight and an honor to the American Institute of Architects at its last convention to make him an honorary member. Young in years, mature in judgment, by his death the profession of landscape architects has lost one whom, had he lived, would have been a fitting successor to his friend and business associate, Frederick Law Olmstead.

Of the honorary members Eugene Letang, Professor of Architecture in the Massachusetts Institute of Technology, and Richard Auchmuty, of New York, have left their indelible impress upon hundreds of men in two different walks in life; the former on the numerous graduates of an institution which has done so much for the profession of architecture throughout the country, and the latter on the graduates of the trade schools which were founded and maintained by his individual efforts. The fourth honorary member, Henry Whitestone, deceased but a few days ago, at the ripe old age of three-score years and fourteen, at his home in Louisville, Kentucky, where, forty years ago, in the prime of life, he was in the active practice of his profession, erecting buildings in that perennial style of Italian Renaissance of which he was master, and from which he was never lured by passing fashion.

The number of Chapters of the A. I. A. is 23; number of Fellows, 475; number of honorary members, 52; number of corresponding members, 55.

The directors would respectfully nominate for honorary members of the A. I. A. the following persons: Halsey C. Ives, St. Louis; Frank D. Millet, New

York; Lyman J. Gage, Chicago; and for corresponding members: Prof. F. W. Putnam, Curator Peabody Museum, Harvard College, Cambridge, Massachusetts; Professor Goode, Smithsonian Institution, Washington, D. C.; Theodore Cooper, New York, and Lathan Anderson, Cincinnati.

The treasurer, S. A. Treat, submitted his report, which was audited by W. W. Carlin and A. F. Pashley and reported correct, a balance of about \$2,000 being found in the treasury.

The secretary submitted an abstract of the Chapter reports.

No report of the Committee on Foreign Correspondence was submitted, the chairman, Mr. R. M. Hunt, being absent in Europe. S. A. Treat, for the Committee on Uniform Contract, submitted the following report:

REPORT OF COMMITTEE ON UNIFORM CONTRACT.

Your Committee on Uniform Contract beg leave to report that the last meeting of the Joint Committee of the American Institute of Architects and of the National Association of Builders was held at the office of Messrs. Adler & Sullivan, October 19, 1892.

At that time numerous communications were read in which suggestions were made as to changes in the form. In accordance therewith several important changes were made. The form was considerably shortened—about five hundred words having been eliminated. The paragraphs were rearranged, grouping the requirements of either party by themselves, and in both cases the singular number was substituted for the plural. Attention was called to the omission of the clause referring to the penalty for the non-completion of the work at the specified time. So many conflicting views were presented regarding this portion of the form that it was deemed best to omit it, leaving it to the judgment of the parties in interest to draft such a clause as they should agree upon.

Your committee suggest that for the information of the Institute the secretary be requested to cause to be printed such information as will be of value (in circular form) and mailed from time to time to each member. This circular to contain information not only as to the revision of the form, but the name of its publishers, price, etc.

S. A. TREAT, Chairman.

No reports were received from committees on Education, Conservation of Public Buildings, or Competitions, and only a slight change in the Schedule of Charges was presented by the special committee, the Committee on Revision of the By-Laws not being ready to report at this convention.

The two Nominating Committees appointed by the chair, consisted of three members each: S. I. Nickerson, of Providence, Levi T. Schofield, of Cleveland, and W. W. Carlin, of Buffalo; and E. S. Eames, of St. Louis, W. W. Clay, of Chicago, and George B. Ferry, of Milwaukee.

The convention then adjourned to convene again at 10 A.M., August 1.

The second session opened with the report of the committee appointed to report upon the Report of the Board of Directors, S. V. Shipman, of Chicago, chairman, in which it recommended that special means be employed to increase the membership of the Institute in the several states. On the subject of historian of the Institute, it was, in the opinion of the committee, the duty of the secretary to collect such data in connection with his office. The committee also recommended the appointment of the honorary and corresponding members mentioned in the report.

In the adoption of an official badge, which was executed in white and black enamel representing the seal of the Institute, little interest was manifested in the matter, three or four members only voting in the affirmative and none negative. The pin is handsomely executed, and costs each member \$2.50.

The reports of the Nominating Committees were as follows:

Ticket No. 1.—F. S. Eames, Chairman. For president, D. H. Burnham, Chicago; first vice-president, George B. Post, New York; second vice-president, Levi T. Schofield, Cleveland. Secretary, George B. Ferry, Milwaukee. Treasurer, Glenn Brown, Washington. Directors for three years—E. H. Kendall, New York; S. A. Treat, Chicago; Alfred Stone, Providence; Cass Gilbert, St. Paul; Thomas Hastings, New York; A. Page Brown, San Francisco; C. F. Schweinfurth, Cleveland; Robert Stead, Washington. Director for two years—A. F. Rosenheim, St. Louis.

Ticket No. 2.—S. I. Nickerson, chairman. For president, D. Adler, Chicago; first vice-president, Stanford White, New York; second vice-president, George B. Ferry, Milwaukee. Treasurer, S. A. Treat, Chicago. Secretary, Alfred Stone, Providence. Directors for three years—E. G. Lind, Atlanta; G. A. Frederick, Baltimore; Henry Van Brunt, Kansas City; Oliver G. Traphagen, Duluth; Jeremiah O'Rourke, Washington, D. C.; Edward H. Kendall, New York; James F. Alexander, La Fayette; Joseph H. Pierce, Elmira. Director for two years—G. S. Orth, Pittsburgh.

The result of the election was as follows, forty-five votes being cast: President, Daniel H. Burnham, of Chicago; first vice-president, George B. Post, of New York; second vice-president, Levi T. Schofield, of Cleveland; treasurer, Samuel A. Treat, of Chicago; secretary, Alfred Stone, of Providence. Directors for three years—E. H. Kendall, of New York; Cass Gilbert, of St. Paul; Thomas Hastings, of New York; C. F. Schweinfurth, of Cleveland; George A. Frederick, of Baltimore; Henry Van Brunt, of Kansas City; Jeremiah O'Rourke, of Orange, New Jersey. Director for two years, to fill vacancy of P. P. Furber, deceased—A. F. Rosenheim, of St. Louis.

The secretary having announced the result of the ballot President Kendall said: "You have heard the result of the election, and in anticipation of laying down the cares of this office upon the 1st of January, I have to thank you most cordially for my two terms of service as president. It has been agreeable service; it has been interesting service; above all things it has been service and work. It was a great pleasure to go several times to Washington to appear with you before the House and Senate Committees and before Secretary Carlisle. The office in New York is a place of high dignity and responsibility. At the time when there was much discussion about the preservation of the old City Hall, committees were formed in all parts of the city and it was a great

honor to this Institute that its president was made chairman of all the committees—of the City Club, of the Century Club, of the Historical Society, representing some of the oldest societies in New York—and was delegated to present a memorial address to the mayor of the city. In the formation of the Municipal Art Society, which was spoken of in my opening address, your president was called upon to take active part and to again address the mayor in behalf of the society. So you see the work has been interesting, which it could not have been, had there been little to do. I congratulate you upon having elected as my successor Mr. Daniel H. Burnham."

A vote of thanks to the Illinois Chapter was passed and the convention adjourned.

WORLD'S CONGRESS OF ARCHITECTS AT CHICAGO.

THE World's Congress of Architects, held under the auspices of the World's Congress Auxiliary of the World's Columbian Exposition in the general division of architecture of the department of art, convened at Chicago, July 31, 1893.

The Auxiliary Committee of the congress consisted of Daniel H. Burnham, chairman; William L. B. Jenney, Solon S. Beman, and Robert Craik McLean, editor of THE INLAND ARCHITECT, of Chicago, secretary. The Advisory Council of the congress was as follows:

ADVISORY COUNCIL OF THE WORLD'S CONGRESS OF ARCHITECTS, AT CHICAGO, 1893.

FOREIGN MEMBERS.

Charles Garnier, Member of the Institute of France.
George Soudon Bridgman, M.S.A., Delegate from the Society of Architects, London.
M. Dammet, President of the Central Society of France, Member of the Institute of France.
E. Salomons, F.R.I.B.A., President Manchester Society of Architects, England.
M. Guadet, First Vice-President of the Central Society of Architects of France, Professor at School of Fine Arts.
Charles Lucas, Member of the Central Society of Architects of France.
W. Arthur Hazell, President Nottingham Architectural Society, England.
F. Adolphe Bocage, Member Central Society of Architects of France. Special delegate representing the Central Society, the Society of Fine Arts and the Mutual Defense Association of France.
J. Maciver Anderson, President Royal Institute of British Architects.
William Emerson, Hon. Sec. R.I.B.A., London.
Josiah Conder, F.R.I.B.A., Member of the Society of Japanese Architects, Tokio, Japan.
Mariano Belmas, Director of the Department of Public Works, Madrid, Spain.
Tatsuzo Soné, Lecturer upon Architecture in the Imperial University, Member of Council and Special Representative of the Society of Japanese Architects, Tokio, Japan.
Leone Massimiliano Di Minerbi, representing the Italian Society of Engineers and Architects, Rome.
M. Pangoy, President; M. De Foucault, First Vice-President; M. Buyron, Second Vice-President; M. Reybaud, Secretary of the Society of Architects of Marseilles, France.
Robert Walker, President of the Society of Architects, London.
C. O. Gleim, Member of the Association of German Architects.
Herr Hinkelndyn, Chief Government Architect, Berlin.
John Bobula, Jr., Delegate of the Hungarian Government and Commerce.
H. Ende, Government Architect, Berlin, Germany.
Gensippe Toggi, Italy.
The Presidents of the Architectural Societies.

UNITED STATES MEMBERS.

Edward H. Kendall, President of the American Institute of Architects.
Alfred Stone, Secretary of the American Institute of Architects.
The Members of the Committee on Foreign Correspondence of the American Institute of Architects; Richard M. Hunt, chairman.
The Presidents of State and Local Chapters of the American Institute of Architects.

The sessions of the congress occupied the week following July 31 and the general programme was as follows:

THE WORLD'S CONGRESS OF ARCHITECTS.

Monday, July 31, 10 A.M. Hall 22.—First Session—The Twenty-seventh Annual Convention of the American Institute of Architects. President, Edward H. Kendall, New York; Secretary, Alfred Stone, Providence, Rhode Island. (For details of convention see special programme issued by the American Institute of Architects.)

Monday evening, 8 P.M. Hall of Columbus.—Formal Opening of the Congresses in the Department of Art.

Tuesday, August 1, 10 A.M. Hall 22.—Second Session—The Twenty-seventh Annual Convention of the American Institute of Architects.

Tuesday, August 1, 2 P.M. Hall 22.—Formal Opening of the Congress of Architects. D. H. Burnham, Chairman. Paper: The Organization of the World's Columbian Exposition. D. H. Burnham, Chicago.* Paper: The General Scheme and Plans of the World's Columbian Exposition. Frederick Law Olmstead.* Paper: The Construction of Buildings, Docks, Piers, Bridges, etc. E. C. Shankland, Chief Engineer, World's Columbian Exposition.*

Wednesday, August 2, 10 A.M. Hall 22.—Paper: Conditions of Architecture in Japan. Josiah Conder, F.R.I.B.A., Tokio, Japan. (Read by Tatsuzo Soné, Member of the Society of Japanese Architects.)† Paper: Public Competitions. J. Guadet, First Vice-President of the Central Society of Architects of France, Paris.† Paper: On the Use, for Transportation, of the Lagoons, of Lake Michigan, of the Intramural Railway, of the Alley Railway, of the Great Trunk Lines, of the Terminal Facilities, of the Chair System, etc., on the World's Columbian Exposition. W. H. Holcomb, Chief of Transportation, World's Columbian Exposition.* Paper: The Mechanical Power Plant of the World's Columbian Exposition. Charles F. Foster.* Paper: The Electrical Plant, etc., of the World's Columbian Exposition. R. H. Pierce, Chief Electrical Engineer, World's Columbian Exposition.* Paper: Acoustics in Relation to Architecture. Alex. F. Oakey, San Francisco, California.† Paper: Comparison of Paris and Columbian Expositions. Bannister F. Fletcher, Honorable Secretary, Architectural Association of Great Britain, London.†

Thursday, August 3, 10 A.M. Hall 22.—Paper: Architecture in Apartment Buildings. F. Adolphe Bocage, Member of the Central Society of Architects of France, Paris.† Paper: Sculpture in its Relations to Architecture. William Emerson, Honorable Secretary, R.I.B.A., London.† Paper: Economic Conditions of Architecture in America. Barr Ferree, New York.† Paper: Some Considerations Affecting the Development of Characteristic Style in the United States. Henry Van Brunt, F.A.I.A., Kansas City.* Paper: Ethics in Architecture. A. J. Bloor, F.A.I.A., New York. Paper: A Review of Recent Plumbing Practiced in the United States. Glenn Brown, F.A.I.A., Washington, D. C.*

* Prepared for the American Institute of Architects, and read before the congress by their courtesy.

† Prepared for the Congress of Architects.

Friday, August 4, 10 A.M., Hall 22.—Paper: Government Practice. Jeremiah O'Rourke, F.A.I.A., Washington, D. C. Supervising Architect U. S. Treasury.* Paper: The Use of Color in Architecture. H. Langford Warren, F.A.I.A., Boston, Mass.* Paper: Foundations of Buildings. William R. Hutten, F.A.I.A.* Paper: Fireproof Construction and the Practice of American Architects. P. B. Wight, F.A.I.A., Chicago.* Paper: Statutory Regulations. William Worth Carlin, F.A.I.A., Buffalo, N. Y. Paper: The Aération of Cities and their Buildings. Everett T. Potter, F.A.I.A., New York.* Paper: Architectural Engineering. Thomas C. Clarke, F.A.I.A.* Paper: A Review of Chicago Architecture. Frederick Baumann, F.A.I.A., Chicago.*

Saturday, August 5, 10 A.M., Hall 22.—Paper: Polychromatic Treatment of Architecture. Louis H. Sullivan, F.A.I.A., Chicago.† Paper: Library Buildings. J. L. Smithmeyer, F.A.I.A., Washington, D. C.* Paper: The Influence of Building Laws upon Architectural Development. Charles H. Blackall, F.A.I.A., Boston.* Paper: Association for Mutual Defense. T. M. Clarke, F.A.I.A., Boston.* Paper: Cohesive Construction, Past, Present and Future. R. Guastavino, Chicago. Paper: Superintendence in Architecture. R. W. Gibson, F.A.I.A., New York.* Paper: Engineering in Architecture. Louis de Coppet Berg, F.A.I.A., New York.*

The formal opening of the congress was attended by representatives of the general divisions in the department of art, including architecture, painting and sculpture, decorative art and photography, and was addressed by Mr. Charles C. Bonney, president of the auxiliary, and Walter C. Larned, of department of painting and sculpture. Among the distinguished foreign architects present were Mr. Tatsuzo Soné, of Japan, Mr. George Soudon Bridgeman and Mr. William Emerson, of England, Mr. F. Adolphe Bocage, of France, Dr. L. M. Minerbi, of Italy, John Bobula, of Hungary and others.

The Congress of Architects opened with a short address by President C. C. Bonney, who introduced the chairman of the congress, Mr. Daniel H. Burnham.

Mr. Burnham addressed the congress, stating the objects for which it was called, dwelling upon the increased enlightenment prevailing in the art world and the hope for the future, and then called upon Mr. E. H. Kendall, president of the American Institute of Architects, to preside during the remainder of the session, Mr. Alfred Stone acting as secretary.

Mr. Kendall made a brief address and at its conclusion announced the first paper upon the programme, "The Organization of the World's Columbian Exposition," by Mr. D. H. Burnham, director of works (printed on page 5).

Mr. E. C. Shankland, chief engineer, read a paper upon the Exposition construction, docks, bridges, etc. (printed on page 8).

At the conclusion of Mr. Shankland's paper the session adjourned.

The second session opened August 2, with the reading by the secretary of a paper upon the general scheme and plans of the Exposition, contributed by Mr. Frederick Law Olmstead, landscape architect of the Exposition. (This paper with others will be printed in full in a subsequent number.) Papers upon the transportation by land and water were read by Mr. W. H. Holcomb, chief of transportation of the Exposition, and upon the electric plant of the Exposition by R. H. Pierce, chief of electricity. The remainder of the papers for this session were read by title.

The third session of the congress was held August 3, Mr. George Soudon Bridgeman occupying the chair.

The session opened with a paper upon "Public Competitions," written by J. Guadet, first vice-president of the Central Society of Architects of France, and read by the special delegate from the central society to the congress, Mr. F. Adolphe Bocage. Mr. Bocage prefaced the reading of the paper by a few remarks in which he said: "I wish to express the great honor I consider having been chosen by my confrères of the Central Society of French Architects and the Ministry of Fine Arts to represent them at this congress and take the opportunity to thank you for the cordial reception that has been accorded me. I will now with your permission read a paper prepared by one of our masters, M. Guadet, architect of the French government, professor at the school of fine arts and vice-president of the Central Society. The subject is 'Public Competitions.'" In brief, M. Guadet said that after establishing the principle that in forming a competition it is always prudent to take counsel with approved advisers, the speaker said that in general the placing of projects in competition can scarcely be objectionable when the character of the work is to be above all artistic, comprising an original conception, an effort of imagination. It is less practicable when the object is a utilitarian construction requiring patience and successive combinations, continuous elaborations, numerous conferences and the incessant retouching not only of the plan but also of the programme itself; in fine, the proper course may depend even upon questions of persons. Three phases or conditions should be established: First, preparation by the administration interested; second, execution by artists; third, judgment by a competent jury. Giving as a striking illustration of illogical confusion between competition and adjudication, Mr. Guadet cites a recent competition in the department of Aube, in which the contractor who made estimate on the cost of the competition should give guarantees of solvency.

M. Guadet reviewed the conditions of competitions in France, as usually open to all French architects, and was of the opinion that competitions of two degrees were preferable, but were more costly. In regard to signed and anonymous competitions there is a difference of opinion, as the secret competition is never a complete secret, and surely entire publicity is better than imperfect secret, though the signed competition prevents many good artists from entering and encourages the production of projects which are only the work of an agency under the signature of a simple money lender. Under these difficulties, perhaps the wisest course is to give entire liberty to competitors. Leaving the premiums

dependent upon the jury is not admissible. For the judges to deviate from programme is dishonest. A competition is a bilateral contract when the programme is the law of the parties. In the selection of juries, that method which raises the least objection is their appointment by architectural societies and deserves to be recommended. In conclusion, Mr. Guadet called attention to how little in reality the question had been studied, that one method should be decided upon and practiced and be projected by the government as a code to govern all public competitions.

Mr. Henry Van Brunt, of Kansas City, followed with a paper upon "Some Considerations Affecting the Development of Characteristic Style in the United States," and Mr. A. J. Bloor, of New York, read a paper upon "Ethics in Architecture." Other papers upon the programme of this session were read by title.

The fourth session of the congress was opened August 4, by Vice-chairman W. L. B. Jenney, of Chicago. Mr. Jenney introduced Mr. Jeremiah O'Rourke, supervising architect of the United States. Mr. O'Rourke reviewed the history of the office and its present organization. This includes ten divisions. The engineering and drafting division is charged with the making of all designs, plans and detail drawings required for all the buildings erected and with the correspondence relating thereto. Fifty to sixty draftsmen are employed, and salaries range from \$3 to \$8 a day. The salary of the supervising architect is \$4,500 a year.

Mr. Levi T. Scofield, of Cleveland, was called to the chair and presided through the remainder of the session. Mr. Frederick Baumann, of Chicago, read "A Review of Chicago Architecture."

The Secretary read a paper prepared by H. Langford Warren, of Boston, upon "The Use of Color in Architecture." This was followed by an interesting paper by Mr. P. B. Wight, of Chicago, upon "Fireproof Construction," and Mr. William Worth Carlin, of Buffalo, entertained the congress with a well written and delivered opinion upon "Statutory Regulations." Other papers were read by title and ordered printed in proceedings.

The concluding session of the congress, August 5, was perhaps the most interesting of the series and largely attended, great interest being manifested in the several papers, some of which had been postponed during the preceding sessions. M. Bocage, of the Central Society of Architects of France, occupied the chair, and the session opened by the introduction of Mr. Louis H. Sullivan, of Chicago, who read a paper upon "Polychromatic Treatment of Architecture." Mr. Sullivan's successful coloring of the Transportation building at the Exposition made the development of his theory of intense interest. It was illustrated by black and white and colored diagrams. Mr. Sullivan's paper was rather in the nature of an oration, and though a sudden indisposition compelled him to read it and somewhat abridged the remarks which he intended should more fully explain the diagrams, the effect was in nowise lost. Commencing with a general proposition of the psychological aspect of polychromatics the speaker said in effect: "Remember we are not Greeks. We do not speak their language, nor even in the most isolated cases can we speak their language as they spoke it. We are Americans, and to attempt to substitute ourselves for Greeks is clear perversion. Each architect must have his own individual system. Polychrome is not architecture, but the building must be designed for polychrome and become a part of it." Showing a diagram the speaker said he would show the genealogy of forms as he understood it. The diagram showed a very complex form in order to show the process from a simple idea to the most complex expression of it. The basis was two straight lines and two circles, and from stiff geometric forms they gradually take on sentiment, and pushing forward as the sap of the tree pushes into branches, there is in ornament this outward blending movement. The chief idea is to establish the parentage and descent of form and that all comes from the general idea. Taking up the subject of color the speaker laid down the principle that color, however, varied must be balanced in series. One color after another is not polychrome. It is anarchic. As fixed rules are always dangerous when we have learned our grammar we had best forget it. Mr. Sullivan's paper was received with applause. It will be revised by the author and printed with the black and white explanatory diagrams.

The chairman next introduced Mr. Tatsuzo Soné, of Tokio, Japan, lecturer upon architecture in the Imperial University, member of the Council of the Society of Japanese Architects, and special delegate to the congress. Mr. Soné presented a paper written by Mr. Josiah Conder, government architect at Tokio, member of the Royal Institute of British Architects, upon the "Conditions of Architecture in Japan." Mr. Soné was welcomed by applause by the entire audience, and his reading was listened to with great attention.

Mr. Bocage read a paper upon "Architecture in Apartment Buildings." Mr. R. Guastavino, of Chicago, followed with an exhaustive account of "Cohesive Construction." In defining the term "cohesive construction," the speaker separated the subject of construction into "gravity" and "cohesive," the first founded upon resistance and the second upon the property of cohesion. Mr. Guastavino reviewed the construction of domes, etc., from Achæmenides to the present, and showed a vast knowledge of the different types of construction used by the ancients, the paper being full of valuable data relating to ancient dynasties and their constructive methods, and classed our present methods with the Byzantine, which is one of transition. In conclusion Mr. Guastavino eulogized the new Spanish school of architecture. The paper was listened to with profound interest, and its publication will be looked for by architects generally.

The remainder of the papers were ordered printed in the proceedings. At the conclusion Vice-chairman Jenney in a few words

*Prepared for the American Institute of Architects, and read before the congress by their courtesy.

†Prepared for the Congress of Architects.

thanked the delegates for the earnest manner in which they had responded to the request for papers, some of them having traveled many thousands of miles to attend the congress, and announced that the congress stood adjourned.

OUR ILLUSTRATIONS.

East Nashville School House. Thompson & Gibel, architects. Grotesques, sketched 1880, by L. F. Plympton, Cincinnati, Ohio.

High School Building, Cedar Rapids, Iowa. Joselyn & Taylor Company, architects.

Store Building for James Hollihan, Detroit, Michigan. E. C. Van Leyen, architect.

Residence for E. F. Burnham, Hartford, Connecticut. Hapgood & Hapgood, architects.

Residence of Dr. C. D. Palmer, Avondale, Ohio. George W. Rapp, architect, Cincinnati, Ohio.

Study for University of Chicago, founded by John D. Rockefeller. Henry Ives Cobb, architect.

Residence of Mrs. Fenton Lawson, East Walnut Hills, Cincinnati, Ohio. A. O. Elzner, architect.

Dickson Normal College, Dickson, Tennessee. Thompson & Gibel, architects, Nashville, Tennessee.

Mausoleum for the Forest Hill Cemetery Company, Kansas City, Missouri. Hogg & Rose, architects.

Madison School House, South Bend, Indiana. Wing & Mahurin, architects, Fort Wayne, Indiana.

Warehouse for the Whitman & Barnes Manufacturing Company, Cincinnati, Ohio. A. O. Elzner, architect.

Residence for J. A. Cunningham, Winnetka, Illinois. This design was the one taking the prize for owner, of a 100-foot lot at Winnetka Park Bluffs, in accordance with a competition opened by W. H. Cairnduff & Co. W. A. Otis, architect, Chicago.

World's Columbian Exhibition Views, Chicago: Grand Basin looking toward Agricultural Building; Peristyle and Statue of Columbia; Court of Honor, Electricity Building, McMonnies Fountain, Manufactures Building and Grand Basin; interior of Terminal Station; Maine State Building; Castle in German Village on Midway; entrance to Horticultural Building; South Basin, Administration and Electricity Buildings. From photographs by F. Dundas Todd.

Photogravure Plate: Memorial Arch of Peristyle, World's Columbian Exposition. Architect, Charles B. Atwood. Sculptors for quadriga of Columbus, Daniel C. French and E. C. Potter; sculptor for groups, Bela L. Pratt; sculptor for single figures, Theodor Bauer. The view here given is taken from the Court of Honor, and shows in the foreground the upper part of the bridge that spans the entrance to the grand basin. The Peristyle itself has four rows of Corinthian columns, so that it does not have a weak appearance from any point of view. A small bridge in the center of the arch, equal in width to the space between the two inside rows of columns, connects the two halves of the Peristyle proper. The entire work is executed in staff on a wooden framework, which is built on piles driven through the water. Mr. Atwood had the advantage of designing the Peristyle after all the other designs had been published. The same is the case with his main entrances to the Fine Arts Palace, published in the July number. In the Peristyle arch he has embodied none of the ideas of his predecessors, but has rather adhered to the classic precedents of the memorial arches of ancient Rome, with what success our readers may judge by a comparison of the illustrations now given.

PHOTOGRAVURE PLATES.

Published only with the Photogravure edition.

West Entrance to Manufactures and Liberal Arts Building, World's Columbian Exposition. Architect, George B. Post.

East Entrance to Transportation Building—the Golden Arch—World's Columbian Exposition. Architects, Adler & Sullivan. Sculptor, John J. Boyle.

Façade of French Court, Manufactures and Liberal Arts Building, World's Columbian Exposition. Architect, René Dubuisson. Decorator, Henri P. Motte; statue of France, by J. A. J. Falguière.

North Entrance to Agricultural Building, World's Columbian Exposition. Architects, McKim, Mead & White. Sculptor for pediment, Larkin G. Mead; sculptor for figure of Diana, A. St. Gaudens; sculptor for all other work, Philip Martiny.

Homeopathic Headquarters and Hospital, World's Columbian Exposition. P. B. Wight, architect. This building is located between the Woman's building and the entrance to the Midway Plaisance. It is a sample of some of the smaller buildings that have been erected by private enterprise, and is an exhibit of the homeopathic physicians of Cook county, Illinois. It is a complete model hospital. It is also an illustration of the construction of a building the foundation and framework of which are entirely of wood, and the entire exterior covered with cast staff. The roof is of steel Spanish tiles. It was built in two months, and could easily be moved away and used as a permanent residence.

Headquarters and Exhibition Building, Sweden, World's Columbian Exposition. This building is a complete illustration of the method of building used in Sweden for the last four hundred years and still employed, especially for churches in the rural districts. Nearly all of the materials were manufactured and

worked in Sweden. The first story and the two semi-circular towers on the front are of brick and terra cotta. The superstructure is all of wood framing, and the roofs are covered with shingles. The ground plan is a triangle with hexagonal corner towers. The first stage of the roof construction is hexagonal and the upper stage with open belfry is twelve sided. The entrance staircases are of artificial granite. These are introduced as exhibits. To the right of the building may be seen part of the East India pavilion, designed by Henry Ives Cobb, of Chicago, and the beautiful southwest turret of the German building, which could not be photographed from a nearer point on account of the trees.

South Entrance to Fisheries Building. Architect, Henry Ives Cobb. The whole exterior is covered with staff on a framework of wood. The roof is covered with steel tiles painted red. Nothing has attracted more attention in connection with the decorations of the Exposition buildings than the ornamental modeling of the Fisheries building, and it may be of interest to know how it was accomplished. It is well known that all the ornamentation is derived from forms of fish and aquatic animals; yet the whole effect is that of Norman or Romanesque carving. Mr. Cobb devoted many months of untiring and enthusiastic work to this. He first had all the carving drawn out in faint outline from conventional Romanesque ornament. Then he drew over these lines roughly, in charcoal, sketches of the kinds of animal life he wished to introduce, keeping strictly to the proportions of mediæval ornament. He procured the services of several skillful stonemasons, among whom were Richter and Hurley, secured examples of the actual living things, and had them model all the ornament from these. After repeated corrections by Mr. Cobb, the models were then turned over to the staffmen, who cast the work for the building.

MOSAICS.

THE chairman of the trustees of the Robert Clark Testimonial annual competition, the programme for which was published in the July issue of THE INLAND ARCHITECT, makes the announcement that in addition to the gold, silver and bronze medals mentioned in the programme there will be two additional bronze medals given, a first and second mention, making five medals in all to be competed for.

THE Department of Health of the city of Chicago notifies architects, plumbers, contractors and all others whom it may concern, that on and after November 1, 1893, Section 12 of the ordinance relating to plumbing and drainage will be enforced in the following manner: When the soil, waste, vent, revent and all other pipes (within building) connected or to be connected with sewer, are placed in position, they shall be tested by water in the presence of an inspector of this department, and upon completion of building a second test by peppermint shall be applied before work will be accepted by this office. Certificates of tests and inspection will be issued by this department. Architects and other interested parties are advised to demand said certificates before acceptance of said plumbing and drainage work.

BUILDING OUTLOOK.

OFFICE OF THE INLAND ARCHITECT,
CHICAGO, August 10, 1893.

Reports from the principal cities and towns of the country show a slight falling off in construction work. The opinion of architects is, that the falling off will be only temporary, and that later in the season a revival will take place. Without stopping to pass judgment upon this opinion, it may be said with safety that the volume of work now in sight is greater than at this time last year, but the danger is that much of this contemplated work may be postponed until next season. The industries are depressed. A great many workmen have been disemployed, and employers are not inclined to take any risks. Manufacturing establishments are now being run only to the extent necessary to meet the orders in hand, the accumulation of stock not being deemed wise at this time. The unsatisfactory financial condition is a matter of much concern. The country is looking to congress for the settlement of one or two vexed questions; when these are settled in accordance with the public conception of what is right, confidence will be reestablished, in part at least, and work will go on better. Prices are in most lines stationary; in a few, declining. In building material very little fluctuation has been observed for some months past. Probabilities are in favor of steady prices for the remainder of the year. Iron, steel and hardware are low in price. Brick, lumber, cements, and material for inside finishing, particularly planing mill supplies, are firm in price, but the margin of profit to the manufacturers is very narrow. The situation might be much worse than it is. Capital is not frightened, but simply on guard. New enterprises are falling off, as to actual work doing, but not as to contemplated activity. The people have every confidence in reviving demand, in better conditions, in wider margins, and a general improvement in trade and industry. The labor question occupies but little public attention, and we will probably pass through the year without agitations. It is possible that the spirit of agitation which has caused such a great upheaval in foreign countries, may, like the cholera, spread to this country next year; the signs of the times point that way. The agitation of the future will most likely be for shorter hours of labor, rather than for increased pay. While there is much to regret in the condition at present surrounding us, it takes no prophet's eye to see that we possess the elements for future expansion and growth, and that the momentum which has been attained in recent years of prosperity will carry the country over the present depression into an era of greater activity, as soon as some of the disturbing factors are removed.



MEMORIAL ARCH OF PERISTYLE, WORLD'S COLUMBIAN EXPOSITION, CHICAGO.

CHARLES B. ATWOOD, ARCHITECT.

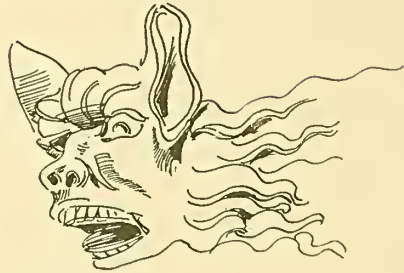
Sculptors for Quadriga of Columbus, Daniel C. French and E. C. Potter.

Sculptor for groups, Bela L. Pratt.

Sculptor for single figures, Theodore Baur.

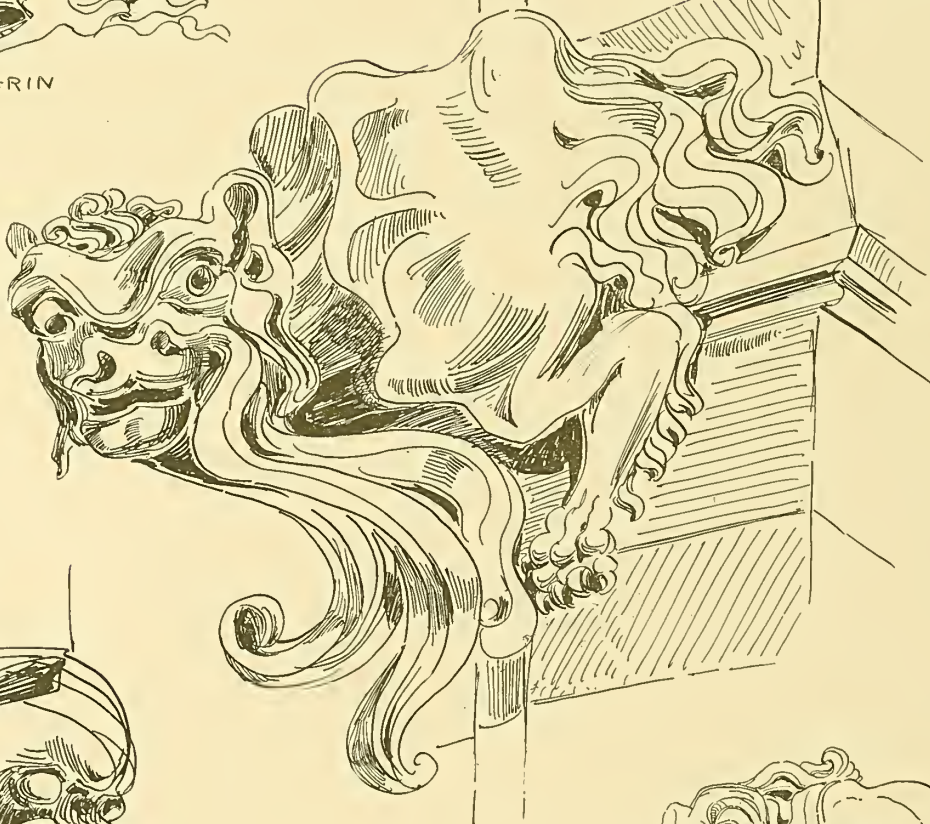
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GARGOYLE

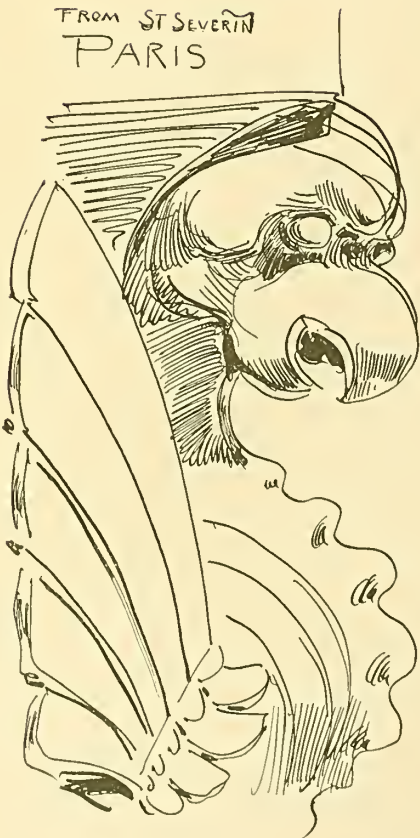


ST SEVERIN

CATH.
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FROM ST SEVERIN
PARIS



GROTESQUES

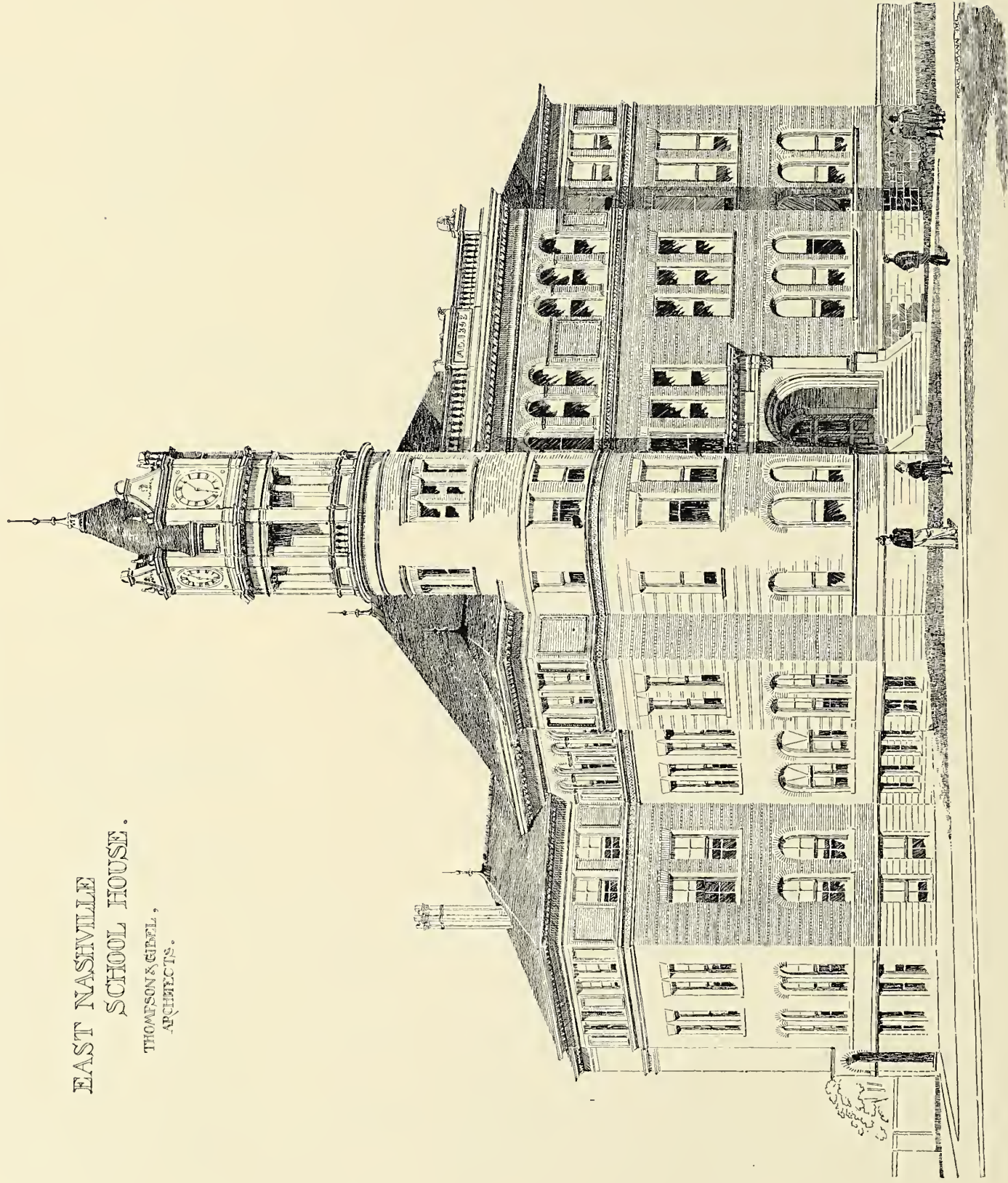
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BY
LUCIAN F. PLYMPTON



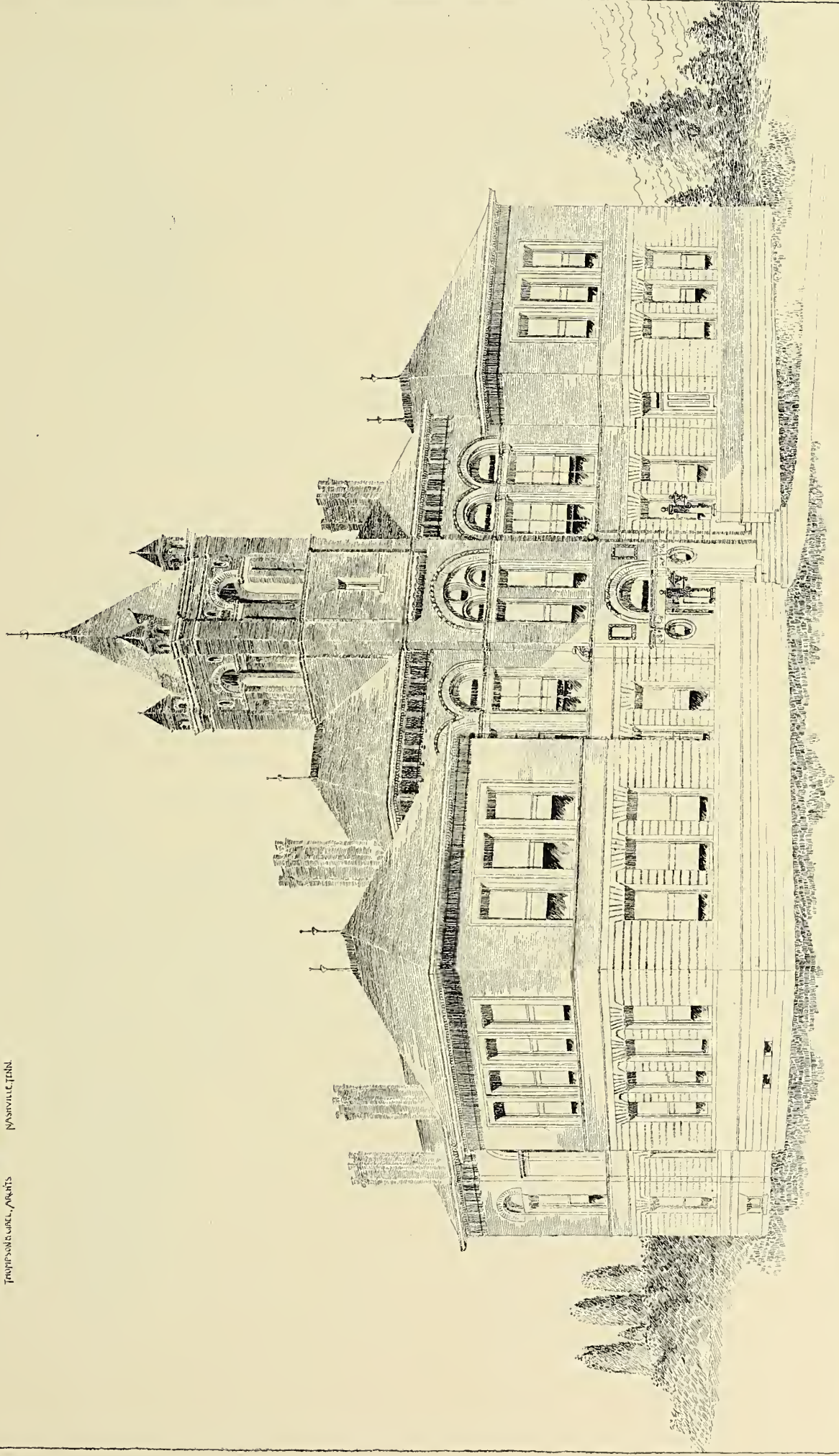
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SCHOOL HOUSE.

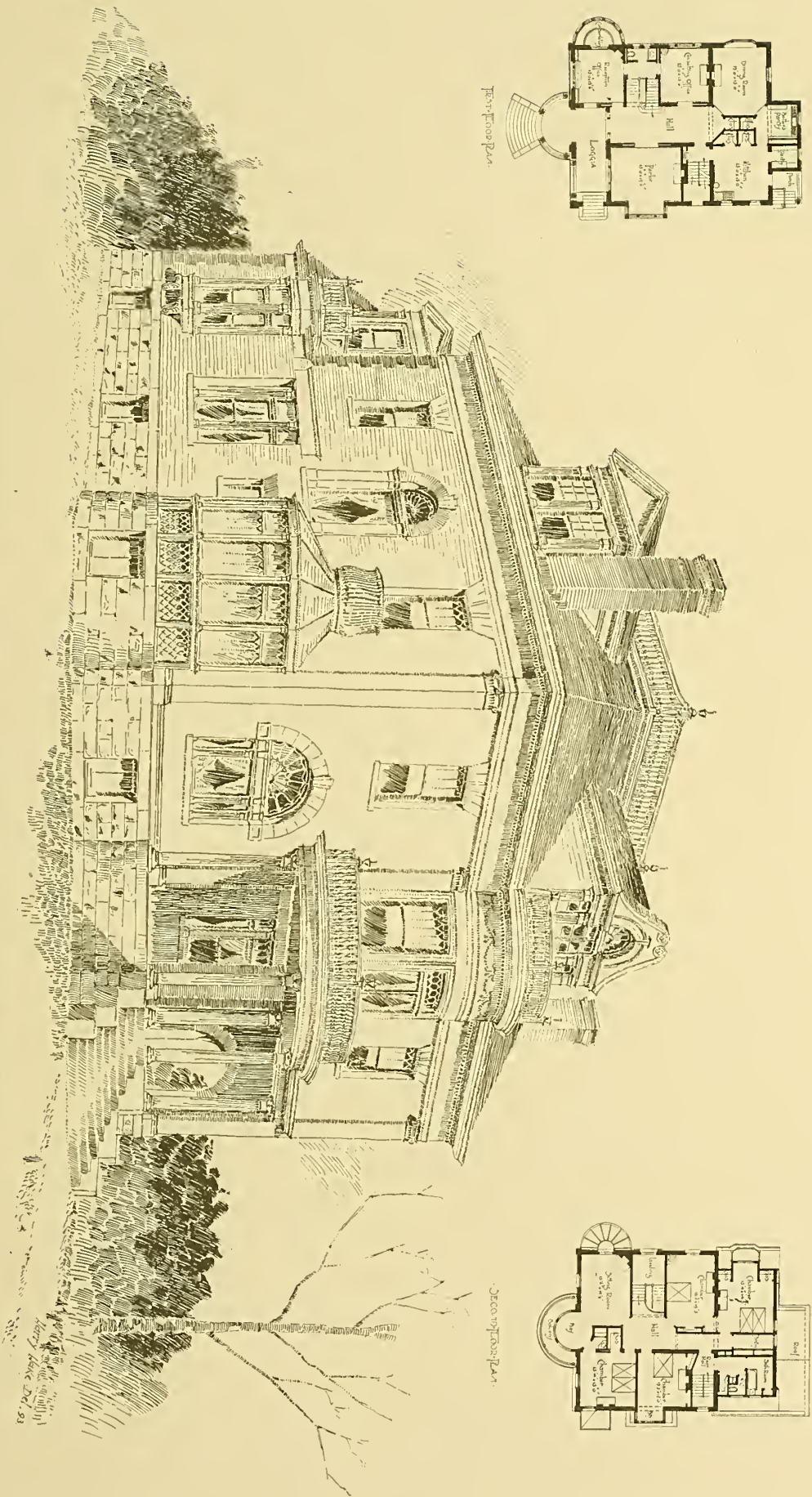
THOMPSON & GIBBEL,
ARCHITECTS.

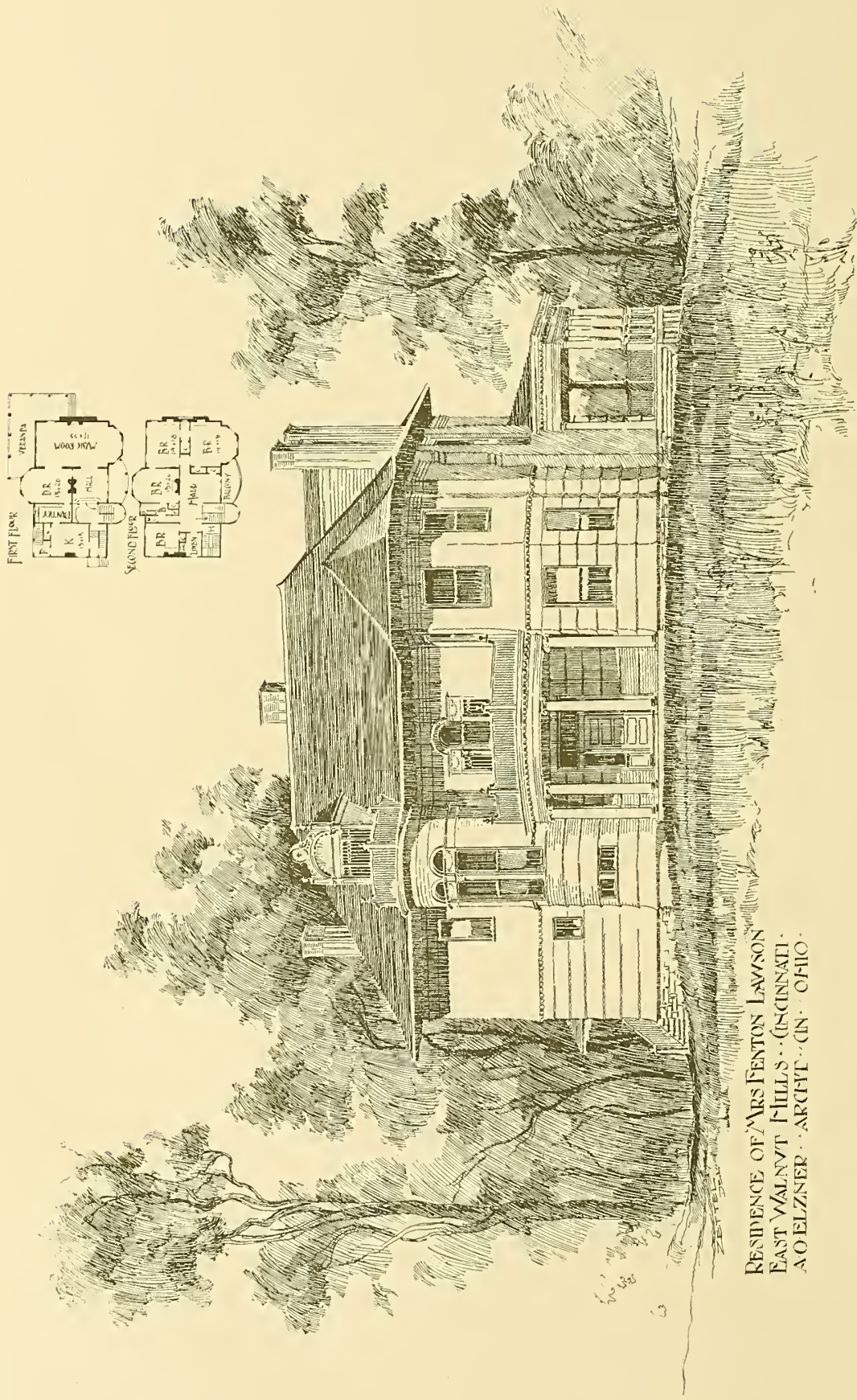


PICKSON: NORMAL COLLEGE
DICKSON, TENN.
TRUPES & WELCH, ARTS
NASHVILLE, TENN.

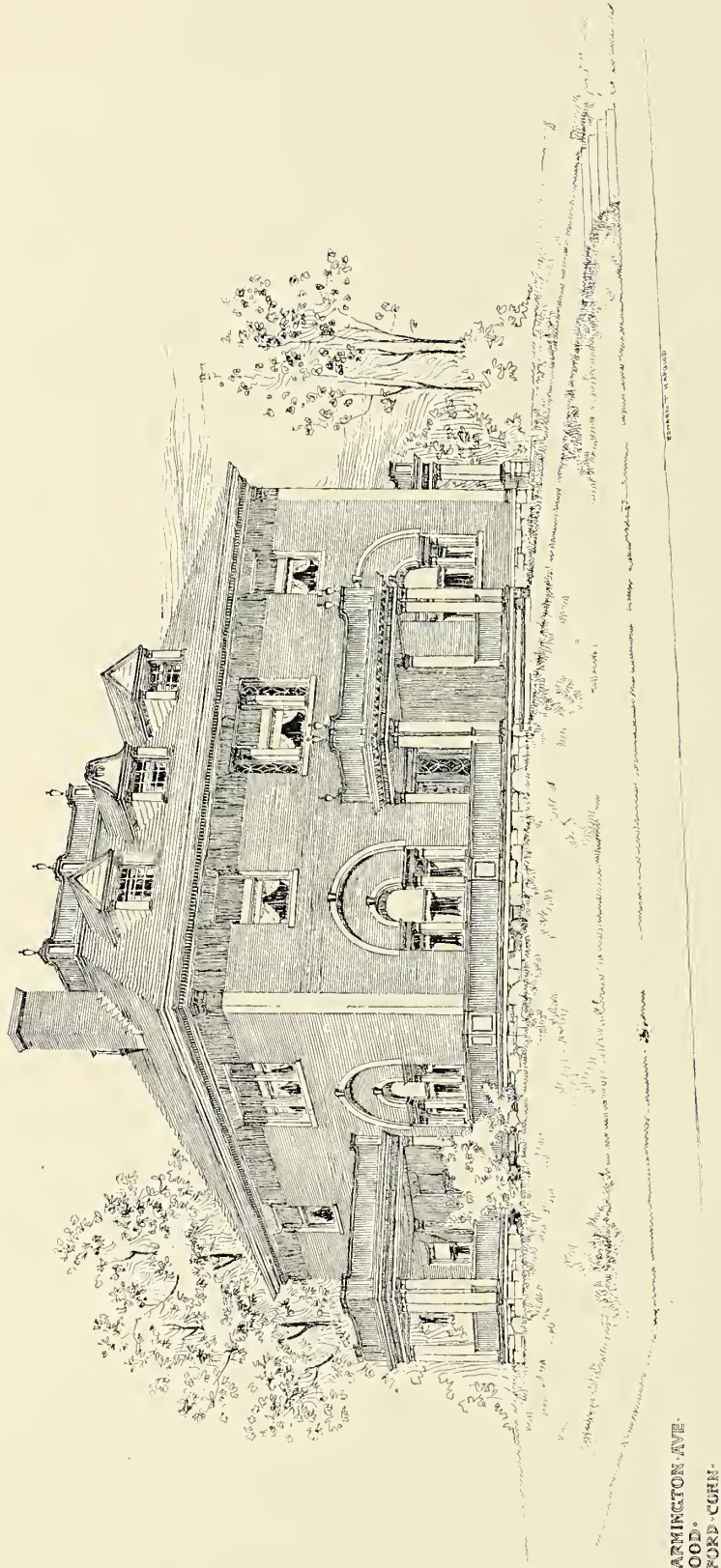


RESIDENCE OF DR. C. D. PALMER, AVONDALE, OHIO.
GEORGE W. RAPP, ARCHITECT, CINCINNATI, OHIO.



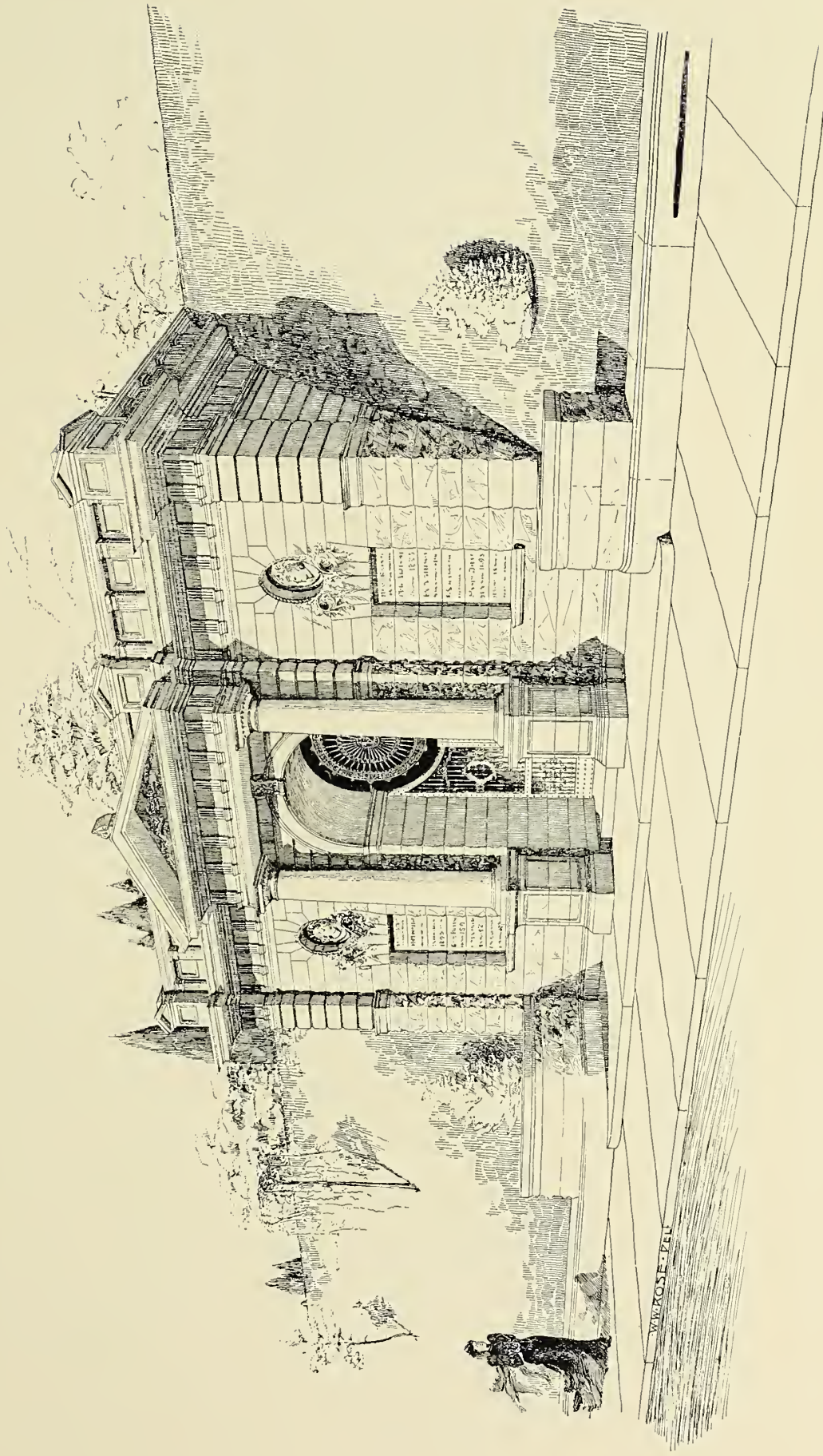


RESIDENCE OF MRS FENTON LAWSON
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A. OELZNER - ARCHT - CIN - OHIO -

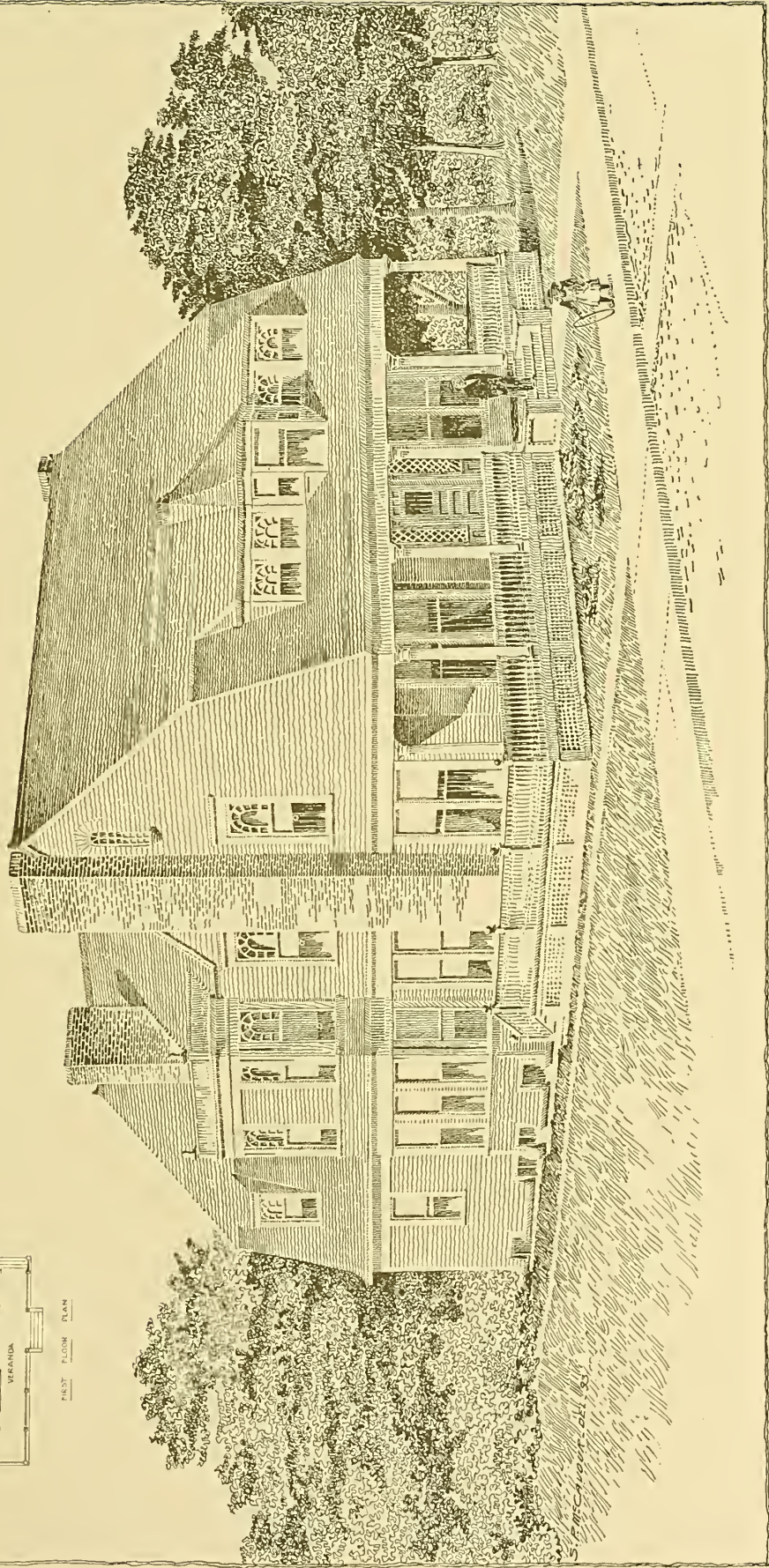
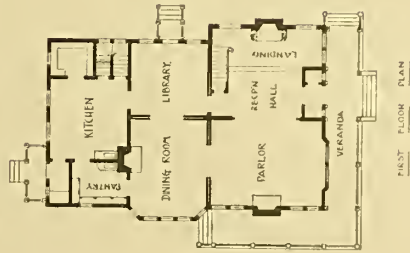


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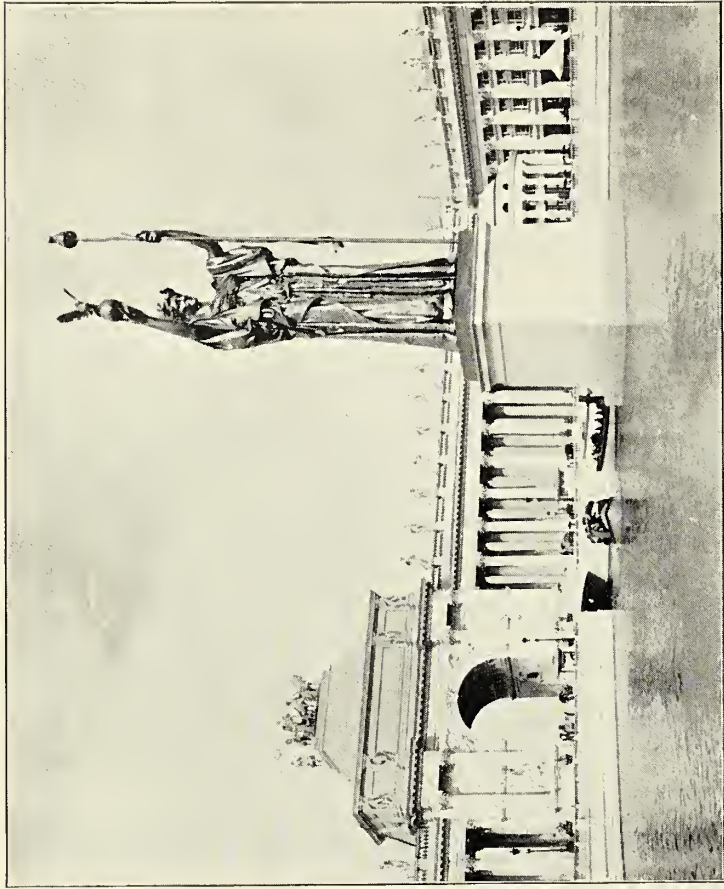


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W.A. OTIS - ARCHITECT
CHICAGO - ILL.

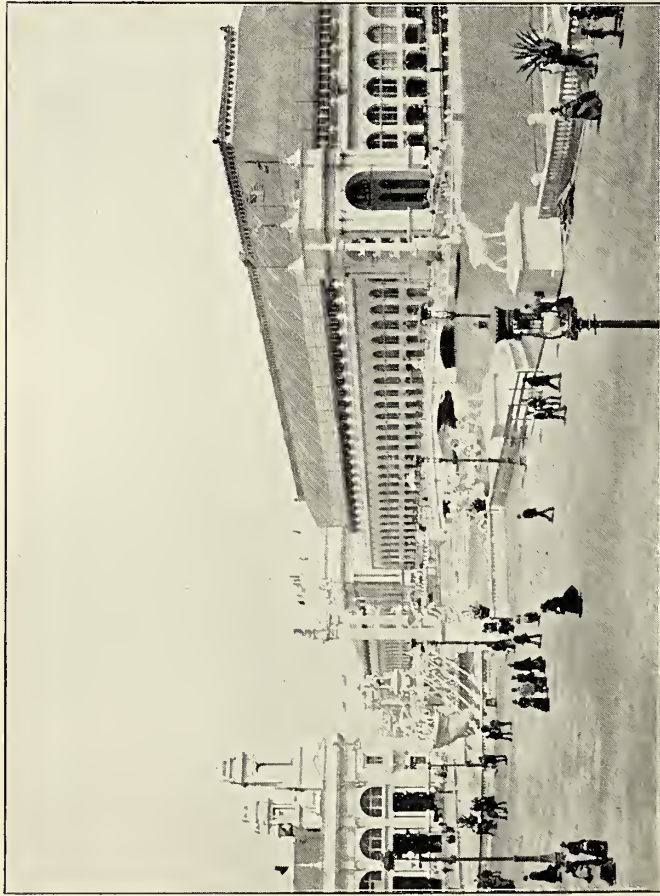




GRAND BASIN, LOOKING TOWARD AGRICULTURAL BUILDING.

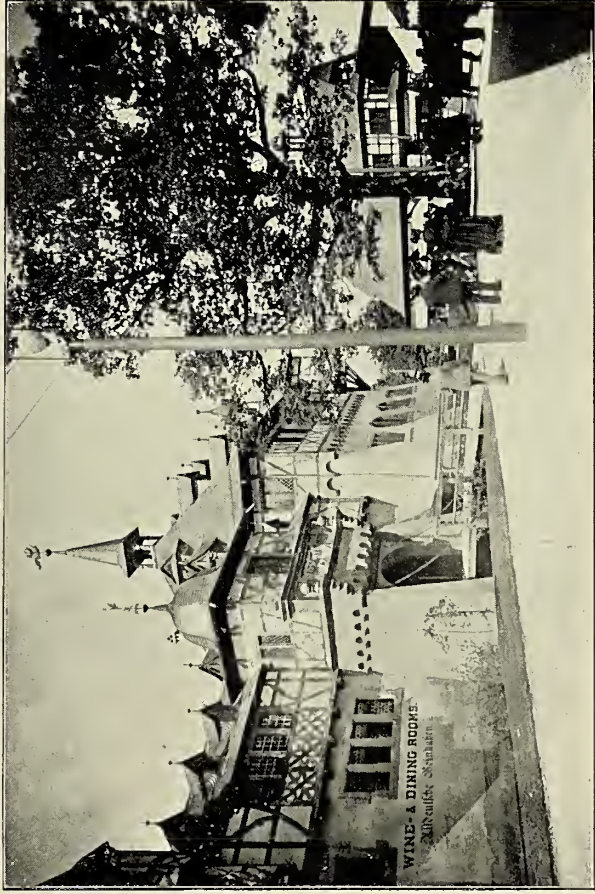


PERISTYLE AND STATUE OF COLUMBIA.

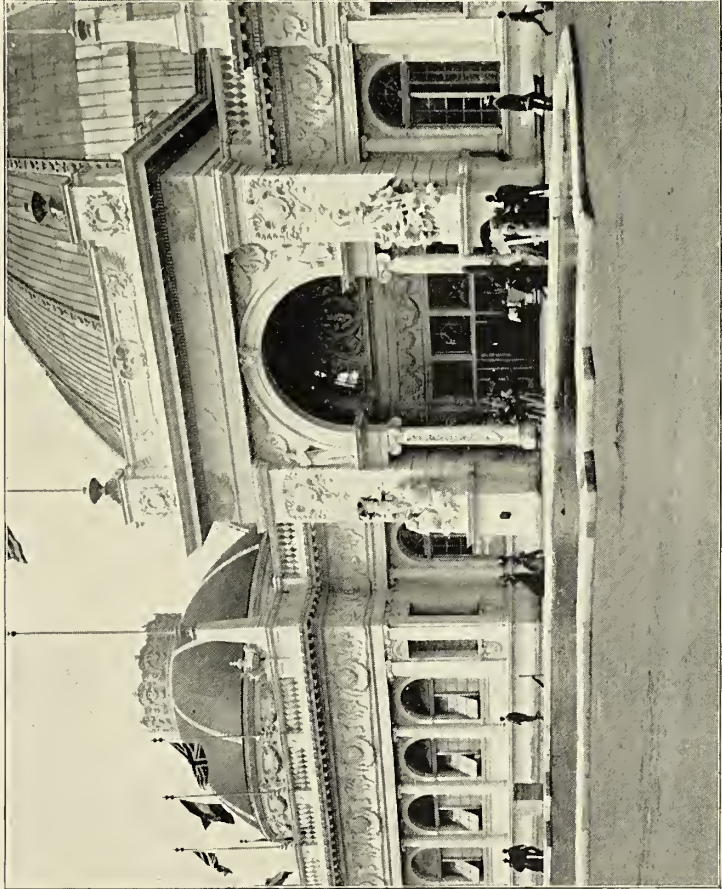




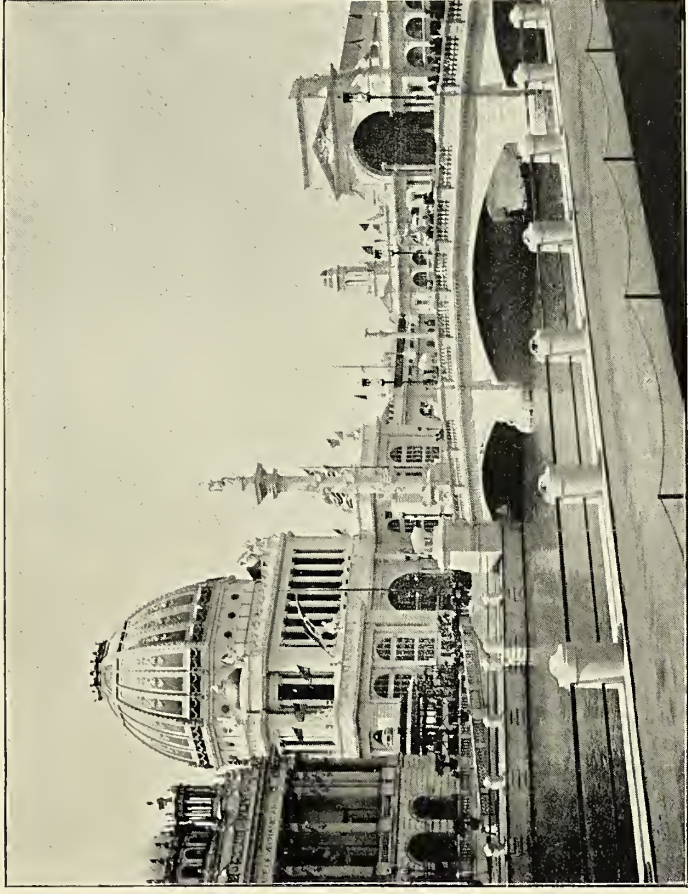
MAINE STATE BUILDING.



CASTLE IN GERMAN VILLAGE, ON MIDWAY PLAISANCE



ENTRANCE TO HORTICULTURAL BUILDING.



SOUTH BASIN, ADMINISTRATION AND ELECTRICITY BUILDINGS

VIEWS OF WORLD'S COLUMBIAN EXPOSITION, CHICAGO.



GRAND BASIN, LOOKING TOWARD AGRICULTURAL BUILDING.



PERISTYLE AND STATUE OF COLUMBIA.



COURT OF HONOR, MACMONNIES' FOUNTAIN, MANUFACTURES BUILDING.



INTERIOR OF TERMINAL STATION.



MAINE STATE BUILDING.



CASTLE IN GERMAN VILLAGE, ON MIDWAY PLAISANCE.



ENTRANCE TO HORTICULTURAL BUILDING.

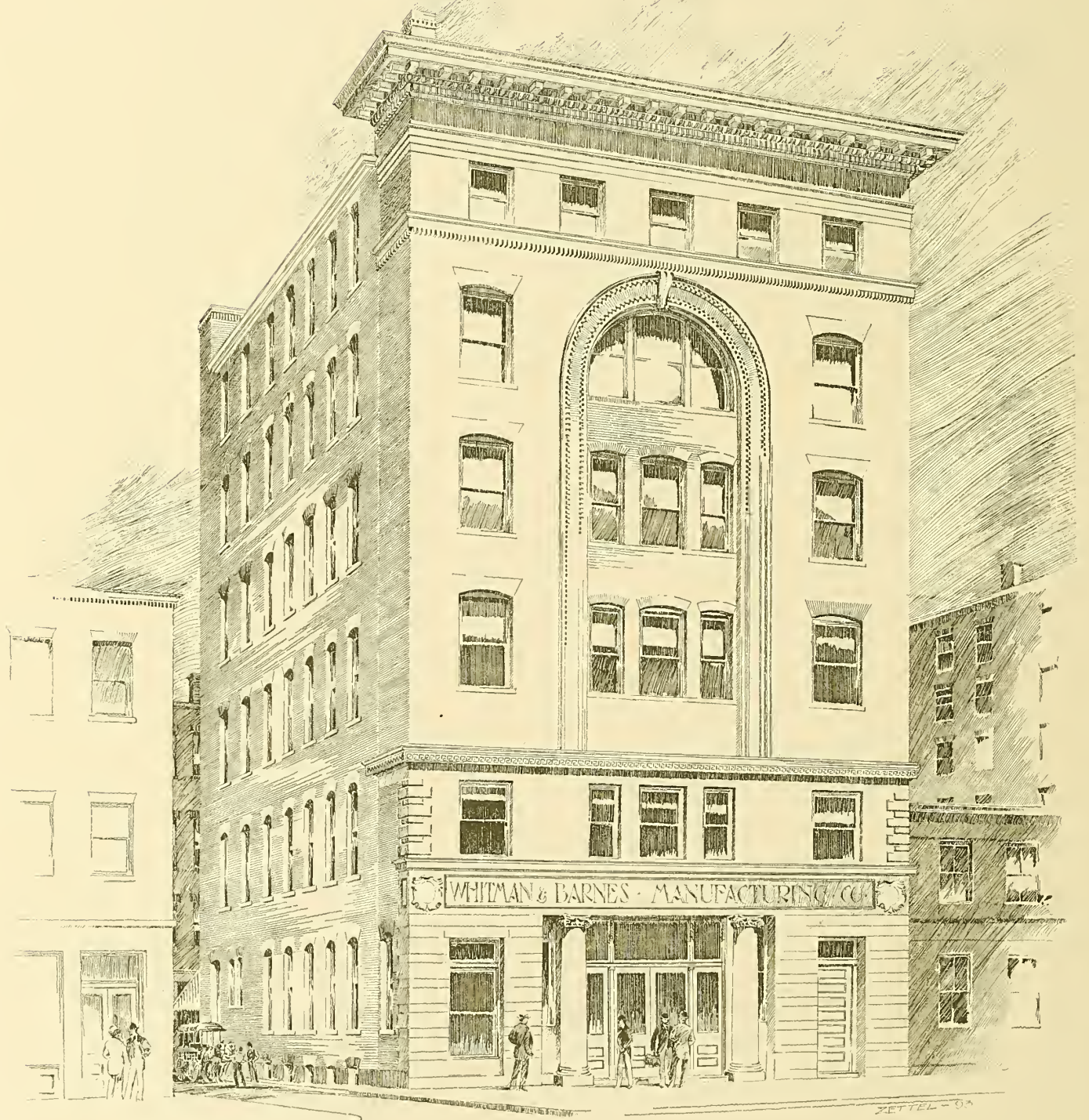


SOUTH BASIN, ADMINISTRATION AND ELECTRICITY BUILDINGS.









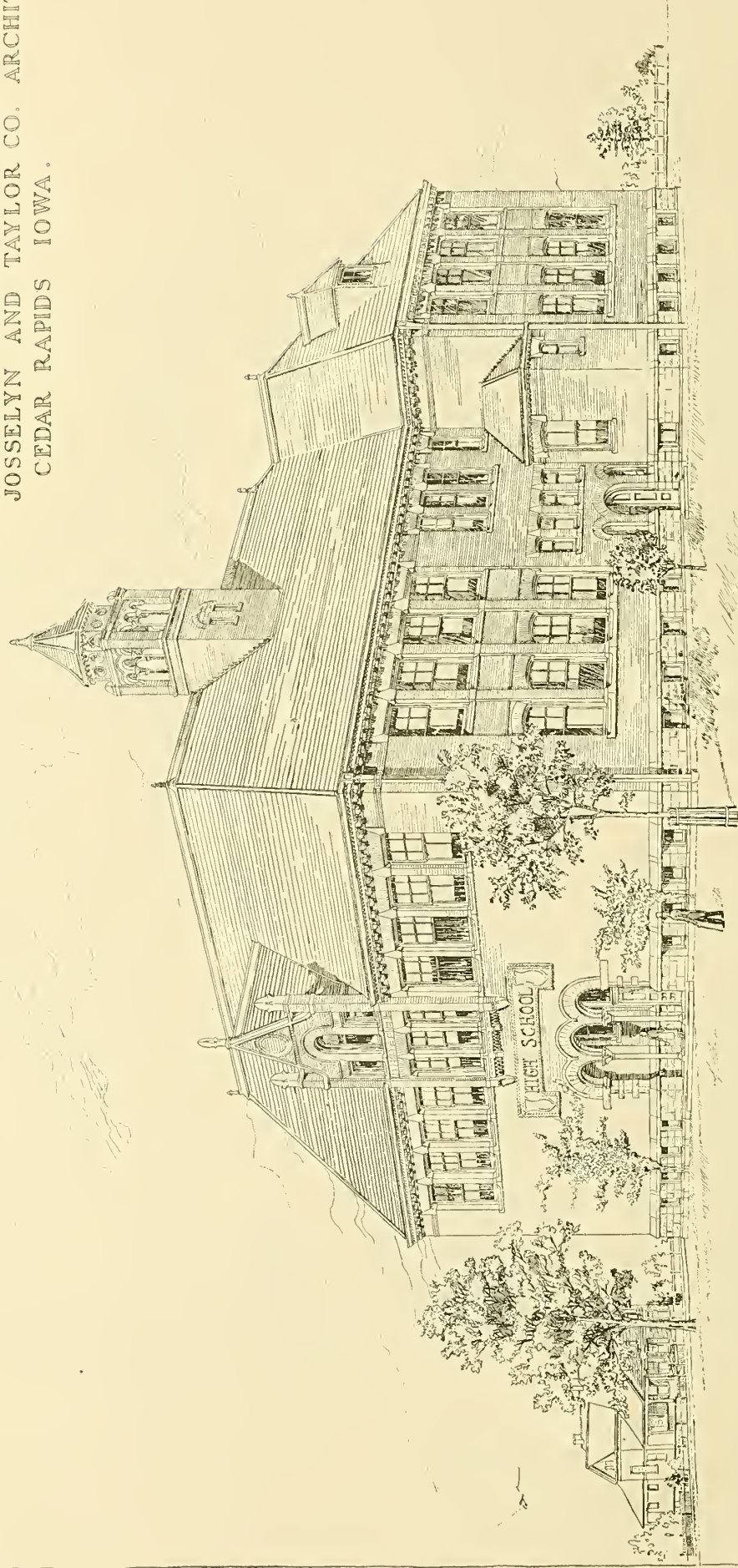
A. O. ELZNER ARCHT. CINCINNATI, O.

WAREHOUSE FOR THE
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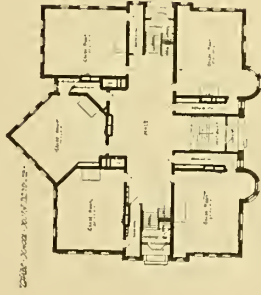
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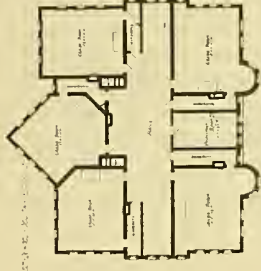


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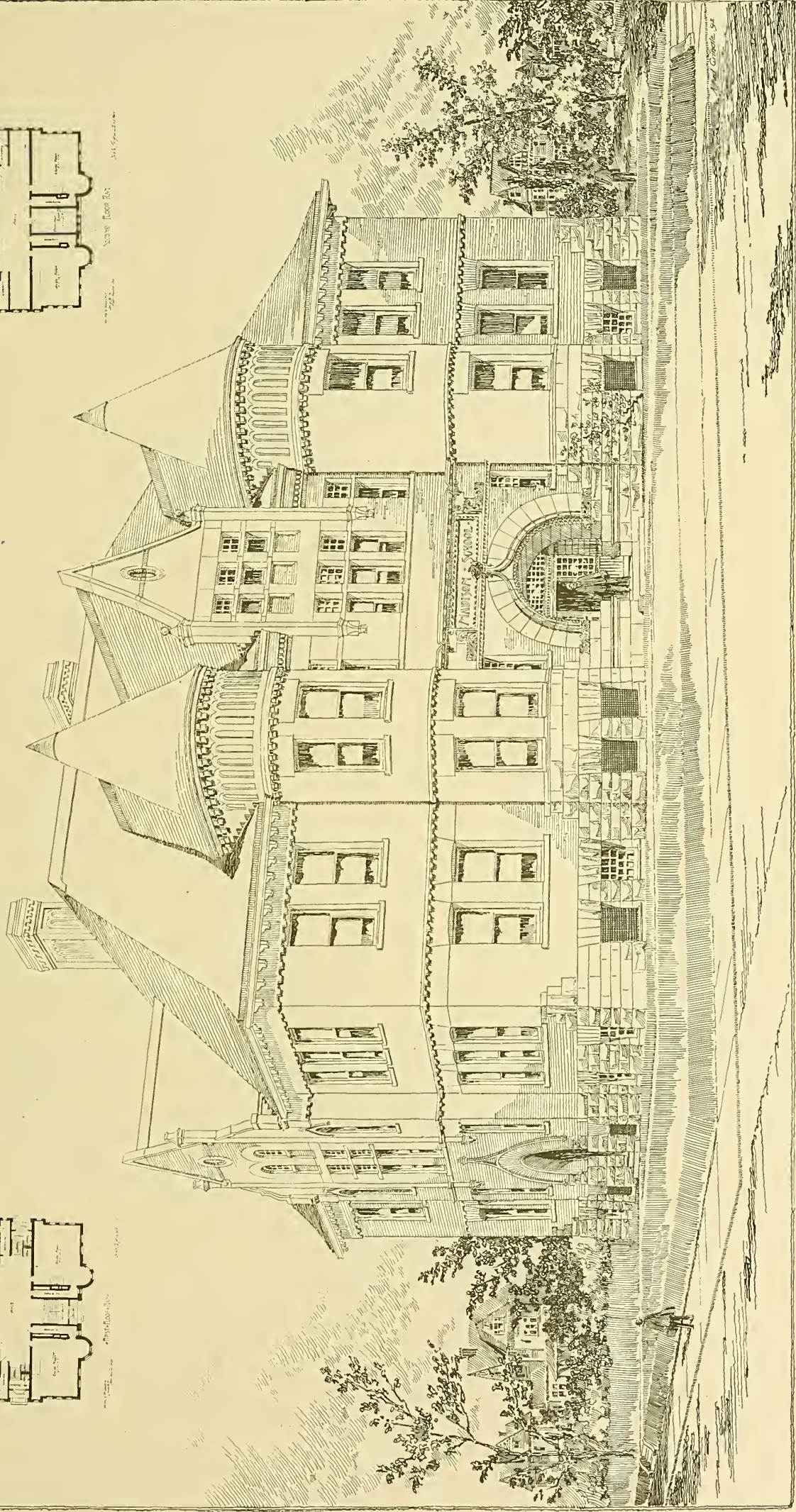


Architectural floor plan of the Ten-Room Public School Building.

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Architectural floor plan of the Wing and Majurin Architects building.





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In Mr. Burnham's paper read before the Congress of Architects and published last month, he was made to say that "the general scheme of land and water was suggested by Mr. Codman." This should read "by Mr. Olmstead."

Landscape Architecture Reviewed by **Olmstead.**

Perhaps the most important contribution to architectural literature that has appeared in recent years is the paper written by Frederick Law Olmstead as a report to the American Institute of Architects upon the landscape architecture of the Columbian Exposition and read before the recent Congress of Architects. As the nestor of landscape architecture in this country it was fitting that he should define the responsibility and limitations of the designer in landscape effects, and in referring to this the proposition is presented and the development of the design of the Exposition is carefully detailed as its conclusion. Although this particular work, the greatest in its province of the century, is used as an example, the writer has gone farther and established rules by which all landscape architecture will be measured. It establishes the relation of surroundings to mass and the subordination of landscape effect to architectural composition. The close of this nineteenth century has not shown an increase in literary force such as marked the preceding epoch, but it has shown that America has an artistic virility which, in its boldness and progressive force, promises a coming century of great things for the world to wonder at. No one seeing the result of the combined work of those artists, whose skill in design and knowledge of proportion aided the genius of conception they possessed, which made and placed the "White City" before men to excite their wonder and paralyze all descriptive power, can doubt that this is indeed no ephemeral growth, though as a spectacle it will fade away, but a real and forceful indication of a positive genesis in American art.

A Columbian Museum Enterprise Organized.

A sentiment for continuation, and, as far as possible, perpetuation has been growing in force since the public became fully impressed with the greatness of the Columbian Exposition. It finds expression whenever the subject of destruction of the buildings or scattering of exhibits is mentioned. To keep the buildings and surroundings intact is not possible, the continuation of the Fair through another year hardly feasible, and as this becomes apparent the public mind looks to lesser things and centers upon a project for saving some of the buildings and such of the exhibits as are ethnological or purely artistic in character. This can be done, and we speak with a degree of certainty that it will be, as those who projected the fair and aided most in its establishment have already combined to this end. The main effort at present is to secure exhibits for what will be known as the Columbian Museum. At the head of the movement is Prof. F. W. Putnam, of Harvard, chief of the department of Ethnology, and while his aim will be to preserve to the museum as much as is possible of the superb exhibit which he has collected and which ranges from prehistoric remains and ruins in Yucatan to the present habitations of the Indians on our north-

west coast and from Ohio to the Saskatchewan. The Mines and Mining department, with its minerals, laboratory, charts, etc., the Horticultural and other exhibits, all will be drawn upon and the result will be equal to the progress of half a century of collection and one that probably could not be duplicated. The subject of buildings to contain this museum will be considered later and probably in the purchase of some one of the Exposition structures. It is almost a certainty that the Art, Horticultural and Agricultural buildings will remain, the former two having that permanency of construction that will make the project feasible and the latter is so constructed as to be easily made stable. Of course there are many difficulties in the way of all these projects. In continuing the Exposition in general the most serious obstacle is in procuring extension of time by the revenue department to foreign exhibitors, then the general national and state legislation necessary and the county and city rights to be harmonized; all this aside from the financial problem that is most difficult at present. The resources of Chicago have never been taxed to their utmost and ways and means will be found to accomplish those things that are of real practical value. The educational value of the Columbian Museum is beyond computation in money, and the expense involved will be met by private subscription if not by public donation.

**A Museum
Movement
by Illinois
Chapter.**

A movement similar in character to that included in the Columbian Museum project was inaugurated by the Illinois Chapter of the American Institute of Architects at its meeting September 18, in the passage of a resolution calling attention to the many architectural objects of value that by proper effort could be obtained as the nucleus of an architectural museum, and providing for the work of organization by the appointment of a committee consisting of the executive officers of the Chapter and the committee of the congress auxiliary or a congress of architects. It is not intended that this project shall in any way conflict with the work of the Art Institute in whose charge the Trocadero casts shall remain or to which will be added the most valuable architectural objects obtainable; but the effort will be chiefly directed toward collecting those objects that are illustrative and small in compass and which will most readily illustrate the progress of architecture or record its advancement. That Chicago should be the receptacle and her architects the custodians of the greatest architectural museum of the country is proper as the center of the country's civilization, and the advantage gained by preserving all that is possible of the collections the Columbian Exposition has brought together will meet the approbation of the profession throughout the country, to whom, as a matter of course, all that is centered there will be open.

**Dangerous
Construction
in Country
Theaters.**

A fire in a small opera house in an Illinois town in which eighteen persons were badly burned, though none fatally, calls attention to the fact that the country is flooded with such buildings, most of which are veritable firetraps. It is not of the halls built years ago occupying space over the country store, in which a stage has been extemporized and where country dances alternate with the feats of the knife swallower or the performance of "East Lynne" or

"Ten Nights in a Barroom," but to the class of modern opera houses built by a syndicate and designed by an "architect" that the buildings of which we speak belongs. They are always in "blocks," the "architect" is a "theater architect" and uses the same plan, with "modifications," for all, and all have the same elements of danger in case of panic or fire. Though the town may have no adequate fire ordinance, an architect of reputation would refuse to construct without proper fire walls, his ability to plan would insure safe exits and proper advantage would be taken to insure safety to occupants even if the exterior design was not as "Mooresque" in effect and galvanized iron in detail as some specialist would think necessary. Of course, the people who employ an architect to construct an opera house do not know that safety and not "decoration" should be the chief thought of the designer. It is unfortunately true that there are few small opera houses in the country that can be pointed to as models. The "theater architect" is early in the field, and by persuasive language and a letter from some theatrical troupe manager secures the job, and the more legitimate practitioner is not consulted. There should be a state law governing the construction of all public auditoriums, and state inspectors to see that the provisions are carried out. In no other way can these too frequent "accidents" in country theaters be avoided. Of course, the passage of state laws governing architectural practice is the only permanent remedy for unsafe building, but in the absence of these the state should inspect all auditoriums.

**Why Owners
Should
Resume
Building.**

No better picture of the present condition of affairs in the architectural field can be presented than that drawn by a draftsman recently in a letter to the *Chicago Tribune*. It applies to the situation in other cities as well, and makes a sound argument in favor of an extended resumption of building operations this fall:

Being under the impression that the general public is not alive to the fact that owing to the hard times and great stagnation in the building trade this city is full of unemployed draftsmen, and a majority of them first-class men, I would ask you to kindly publish this in your valuable paper so that through your columns something might be suggested to relieve them. If those who are desirous of building, say this coming spring, would commence giving their orders to the various architects now, many could be kept employed during the coming winter. By this plan also architects could give their clients better satisfaction by having more time to study and get up their drawings. In so many cases those that intend building leave it to the last moment and then architects have to complete work in two or three weeks, when if ample time were given them they might keep men employed three or four months. I have been more fortunate perhaps than a great many in having kept my position as foreman until the last two weeks. For weeks previous to that nothing was done, but I was kept on in the hopes of something turning up. As it did not, and the prospects looked bad, at last I had to go, and trudging from office to office in search of employment, I was astonished to see the state of dullness in all architects' offices. At nearly every street you meet some comrade, and it seemed sad to meet so many first-class men cast adrift in search of work, a great many having wives and families dependent on them. Draftsmen, as a rule, are a most peaceful, hard-working class of men, therefore do not make known by public meeting and loud talk their griefs. Therefore, you would be conferring a great benefit to them if you could in any way use your columns in stating these facts to induce capitalists who contemplate building to try and develop their plans now. In conclusion, I may say that building can be done very cheap just now, as I know contractors are figuring exceedingly low to get a job just to keep their regular men employed.

Owners have already shown a general realization of the facts contained in the letter and offices are beginning to observe the effects. At no time in the last ten years could first-class draftsmen be obtained so readily as now. Building material and labor is at its cheapest and we cannot but hold out the hope, with these many circumstances as a basis, that it will not be long before the demand for good draftsmen will exceed the supply.

PAINTING AND SCULPTURE AT THE WORLD'S FAIR.

TREATED AS "ART INSTRUCTED" AND "ART INFORMED."

BY H. C. PAYNE.

A PART from this great picture our expectations as to an "Art Instructed" are not fully met in the Spanish group. In the exhibit of a country holding the traditions and inspiration of a Fortuny—a painter whose work both in pictorial completeness and perfect adaptation of touch was the ideal embodiment of the modern "Art Instructed"—we might have expected to find more works holding this kind of completeness. Yet it holds many examples of a highly accomplished art. Conspicuous among the many may be mentioned: No. 111, "The Pilot's Burial"; No. 33, "Episode of the War of Independence"; No. 37, "Port of Barcelona"; No. 91a, "Santa Apostoli Canal"; No. 91, "Study of Ships"; No. 80, "The First Homage Paid to Columbus," which while not very satisfactory as the ideal of an epic moment, is most excellent painting; No. 59, "A Strike," renders very impressively the aspect of a mob; and No. 96a, "Who is Fooling Whom," treats with thorough understanding the momentary superficial attitude of a group of people to each other. This picture is in every respect of execution a master's production, and undoubtedly one of the best-painted pictures in the Spanish group. No. 96, by the same artist, is of the same scope and excellence, representing perhaps even higher achievement, inasmuch as the greater number of figures have increased the difficulty of the problems mastered.

As the Holland art lacks preëminently that nice exactness of touch upon which all small illusion must largely depend, so the Spanish art lacks almost entirely that close sympathy with life itself which justifies in the former a non-observance of such canons as are here accepted.

Finally, I would observe of the Spanish art that it is very interesting, that it pleases the mind and excites in it admiration and often surprise at its very great skill; but that, with one or two exceptions besides the one great one first noted, it holds but little of that quality which excites emotion, and leaves us, though interested and instructed, cold.

As it is not the purpose of this paper to characterize national traits in the various groups of art, other than incidentally, it will suffice to observe of the Russian art as a whole that it but little observes that principle of selection known as composition, and consequently offers many pictures that fail to please the eye in their lines and forms, and that are equally unacceptable as color. It is nevertheless a very interesting exhibit, and full of a hardy vigor of its own. It is largely anecdotal, like the English, and like theirs tells its stories in a sympathetic and intelligent way.

The most notable picture of this group is "Phryne," by Siemiradsky. It is the largest of all the great panoramic canvases in the Fair, and in magnificence and illusion of scenic effect incomparably the best.

Phryne, the heroine, enacts Venns at an old Pagan Festival. She stands unaffected, clothed in noble statuesque beauty, the cynosure of a thousand worshipping eyes. From marble temple throng eager groups. Others arrived, gaze fervent, adoring. At her feet the purple sea breaks in tender green—all under the deep blue—all bathed in the luminous air of full sunlit noon. It is a marvelously accomplished picture, and full of its ideal of life the golden, yet holding us first as it does by its beauty and harmony of line and color, its magnificence as a scene, its place is clearly on the side of the "Art Instructed." No. 88, "The Cossack's Answer," also notably illustrates this art. Though the life treated is so alien both in incident and in the types of its people that we do not yield to it a ready sympathy, yet we find it very expressively painted, and clearly to be classed with the best "Instructed Art" of this exhibit. No. 22, "A Christian Martyr," is as fine an example of an "Informed" as of an "Instructed Art," though I think that it fails to carry out in its climax the large promise of the rest of the picture. The dramatic action of the central figure, while excellent as composition, interferes with our sense of that spiritual self-possession which enters so largely into the martyr ideal. It is, however, a noble picture, full of interest and meaning. No. 93, "Christ in the House of Lazarus," by the painter of "Phryne," is rarely satisfying as a scene. It almost as perfectly meets its own far smaller painting requirements as the other. Nos. 81, 69, 63, 61 and 62 are good examples of a well instructed art, the last three realizing in a notable way that subtler tonal quality which is a color charm conspicuously absent from a very large portion of this exhibit. No. 59, "Night in Little

Russia," is full of the distinguishing charm of the time and place. No. 107, "Columbus Landing at San Salvador," is a magnificent effect embodying a fine ideal. Off shore the little bark rides at peace in its still haven. Air and sea are luminous with evening sunlight, which falls in one flash of concentrated golden promise on the little group and boat just touching shore.

From the Russian exhibit we come out into that portion of the French sculpture that contains the greater portion of its most accomplished works, and pursuing the plan adopted, I will note a few that seem to me most significant of those here, and also some other groups, both here and elsewhere, as lend themselves best to the present purpose.

The sculptor needs more than the painter the informing spirit in his art. Lacking the interest that lies in background and color, his figures must contain more in themselves. A picture treating an individual or a group may lack fineness and concentration of purpose and yet be an interesting and significant example of the painter's art. A work of sculpture, to be significant, must give us more than mere faithful uninformed shapes. They must be determined by some intimate sympathy, some searching thought.

This requirement is so much a canon of this art that it is safe to assert that no modern jury of sculpture, except an Italian one, would admit to exhibition a figure so lacking in *purpose* as the prominent figure in Mr. Harrison's "In Arcadia," No. 522, U. S. Although its absolute insufficiency in all respects but those of related color effect did not hinder the picture in which it was the most prominent feature from acceptance, and with applause, in the salon where it was first exhibited, and yet while it is with things of the spirit that the sculptor must deal, and while his art as a whole is related to the painter's as spirit to form, it has a relatively material side of its own.

This more specially technical expression is illustrated in such figures and groups as "Tencer," No. 44 (English); No. 43, "The Mower," by the same artist; No. 57, "Phryne"; No. 79, "Judith" (French); No. 142, "The Grief of Orpheus"—for in spite of the requirement of the name it is the physical expression of the group that is most felt; in No. 135, "Hero and Leander"; No. 117, "Bacchante"; No. 60, "In Danger"—all French, and in No. 19, "Shipwrecked," and No. 4, "Hope" (Spanish); "La Cigale," also a French figure, near the west entrance to the Russian exhibit, is in its perfect embodiment of the sensation of cold an ideal example of that direction in this art that seeks primarily physical expression.

There are, however, groups and figures that in the intimate sympathy or searching thought informing their cold, perfect lines, accept its fullest opportunity. Such sympathy, intimate as the soul with its grief, determines the gracious lines of Barrias' incomparable group, No. 9 (French), to me the most delightful work of art in the whole Fine Arts' exhibit. It is called "The First Death," Adam and Eve with clinging tender hands hold or convey their dead. The expression of the living figures is typically masculine and feminine. Adam sustains the weight of the dead Abel, back leaning with firm right grasp under the knees, and left arm round the shoulders. Eve clasping him with right hand over the breast, and left hand sustaining the lifeless head, all yielding, kisses the cold brow. The whole passion and mystery of this first great and unknown sorrow are here in this perfect group. Reaching deep down through countless generations of artifice, it finds in its elemental sources, and to our eyes start human tears—tribute to the master.

Almost equally beautiful and touching is "The First Born," No. 89 (French), by Levassier. As before Barrias' group we find again our real human selves. Though as pure line less beautiful than the first, it is perhaps equally significant and typical as the embodiment of a universal ideal. Satisfying, though less distinctly human in its appeal—the love of country, which is its reason, being a product of civilization—is Mercie's group "Quand mème," No. 50.

No. 31, "Joan of Arc," by Chapu, demonstrates how beautiful the draped figure in sculpture may be. But even more felt than its beauty is the noble ideal informing its lovely lines. No. 139 (French), "Blind Man and Paralytic," is another profoundly understood group. The blind man gives what *he* has—strong back and youthful limbs, to the old man he bears, who gives in return what remains to *him*—so the blind sees, the paralytic walks. This group interprets in apt symbol that universal condition of interdependence—the give and take by which we are whole to do our work

and go our way. By comparing this group with No. 106 (French), another treatment of the same theme which carries us no step beyond the physical condition (which, however, it well interprets), we are helped to realize the consummate art of the first.

Among the sculpture other than French, which while fine as form impresses us still more as interpretation of significant ideals, I would note No. 44, by D. French (American), "Death Staying the Hand of the Sculptor." Death symbolized by a winged figure with poppies (emblem of forgetfulness) in its hand, every line instinct with mystery and fate, stays the hand of a vigorous youth as he chisels from the rock a sphynx's head. The answer he would compel from the silent lips is found.

No. 20, "A Captive Mother," in the Danish rooms, is also a fine example of "Art Informed" in sculpture. Deprived by cruel bonds of unministering hands, she gives herself, kneeling, to her infant. In every yielding, gracious line is written mother.

As I have before suggested, there are a great number of works in sculpture that while satisfying the eye with their beauty and harmony of line and evidence of subtly observed action have but little to say to our more intimate selves. Four figures by Paul Dubois must be mentioned even in so brief and uninclusive a review as the present. They are taken from this sculptor's famous "Tomb of Gen. Lemoricié," and are called "Charity," "Faith," "Hope," and "Military Courage." Names do not make purpose in art, nor do they even assist it. What a group or a picture holds in *itself* it is, no more or less. These figures *themselves* touch us at once. The names applied do not make the point of contact; they only help us to realize it.

A brief characterization of "Teucer," No. 44 (English), by Hamo Thornycroft, will serve to indicate the completeness of achievement in the modern "Art Instructed" in sculpture. This will conclude the comment I have to offer on the works illustrating this branch of art in the exhibit. The figure represents a bowman at the instant following the loosing of the bowstring. He stands with feet close, left heel slightly lifted, and tense figure arched sideways toward his mark, watching the arrow just sped. So finely in its every fiber is the power of this perfect figure adapted to its end that we *know* the arrow will reach its mark. As the physical expression of an action embodying an ideal of *contained* power, it is superb, and finely adapted to an art in which this contained quality is a fundamental requirement.

ARCHITECTURE AT THE WORLD'S COLUMBIAN EXPOSITION.

PART III.

FRENCH, GERMAN AND AMERICAN EXHIBITS.

THE characteristics of French exhibits are well known. The French are not sparing of large paper and wide margins, but generally eschew frames. They almost always exhibit full sets of drawings of each building. The exhibit in the Fine Arts building is largely made up of competitive projects. The characteristics of the French academic style are everywhere predominant, unless we may except the work of M. Vandremere, one of the few men of our time who have caught the spirit of the early Romanesque of Ravenna. This exception is seen in the drawings of the Church of St. Pierre de Montrouge of Paris. Very few designs by the great masters of the art are exhibited. The most prominent place is given to the magnificent set of drawings of the Bourse d'Amsterdam by M. Louis Marie Cardonier, of Lille, dated 1892. They are well worthy of study by American draftsmen, who desire to acquire the French method of rendering what may be called "show drawings" for competition. On such preliminary drawings there are few among us who would be willing to expend as much labor. But that they show accurately and completely the details of interior as well as exterior work cannot be questioned. Many of the drawings exhibited are for restoration of ancient buildings in which it would seem as if the French architects had been more busy of late than on new structures of national importance.

What will greatly interest American draftsmen in the French section is the collection of "Studies of Interior Decoration," by Alexander Sandier, of St.-Mande. These are all included under the title number 1193, though there are a great many of them. M. Sandier is well known to the architects of New York and Chicago. Twice he has essayed to establish himself in this country and has returned after each attempt for want of recognition and patronage. Last year he came for the third time on invitation of

Mr. Burnham, and took a position under Mr. Atwood, in the Department of Design of the World's Columbian Exposition. But he returned to France shortly after the opening of the Exposition. While here he designed the Shoe and Leather building, the Children's building, the Clam Bake building, the flagstaffs on the plaza around the Administration building, and several of the minor buildings in the park. But he is best known by the beautiful clock in the Manufactures building. Of these exquisitely executed monochromes of interior decoration, which he has placed in the French section, we have no guide or description except a few pencil marks on them such as "Lady's Chamber," "Daughter's Chamber," etc. They are unique in style, in fact quite independent of all the styles, but showing a slight fondness for the Japanesque. They are all expressive of the refinement, delicacy and reserve so characteristic of their author.

The French exhibit contains one *tour de force* in the design of B. Chaussemiche and J. Bévière, dated August 3, 1892, for a French skyscraper. This is a large drawing for a huge and impossible building. But it is more amusing to see the original drawings than the small cuts of it that were published in our illustrated papers about the time it was first produced. It will be especially amusing to those among us who have solved the "skyscraper" problem until it is now an everyday matter. This building might be anywhere from twenty to thirty stories high, according as we imagine what the windows are to light, or that the stories which might be placed behind the immense cornices are not lighted at all.

The German exhibit is especially remarkable for its models. In the case of three important structures no perspective drawings are shown — only a model, explained by plans and sections. After these the place of honor is given to Bruno Schmidt's immense drawings for the monument to the late Emperor William. Mr. Schmidt is well known in this country by his soldiers' monument at Indianapolis, and his reputation rests mainly on his monumental designs. The drawings of his proposed national monument are in charcoal and mostly drawn free-hand. There are no ground plans, but the perspectives being from both sides the plan is readily suggested. Notwithstanding the great size of the drawings very little detail is indicated. But they show the work of an artist both in the architecture and sculpture. The general impression given is that these are one, and in this the true function of monumental design has been fulfilled. Mr. Schmidt has not been troubled with any necessity for making a high monument, and therefore has had plenty of room for sculpture. We are not acquainted with the proposed location, but the surroundings are suggested on the design. The scheme is for a colossal equestrian statue on a moderately sized pedestal, which dominates the whole design. The statue, raised on a platform approached by steps, is backed by a semicircular peristyle of two rows of coupled columns, thus bringing the latter into groups of four each. There are five bays on each side of a central triumphal arch, terminating at each end in a monumental device. Statues of generals stand between each pair of columns facing the equestrian statue. A continuous die is built between the two rows of columns on each side, and on this are scenes from the life of the great emperor sculptured in high relief. The whole monument is a complete composition whether seen from the front or back.

The great plaster model of the new parliament house at Berlin, commenced in 1884 and just completed, by Paul Wollot, of Berlin, has a commanding position in the center of the west nave of the Art Palace. Credit is given in the catalogue to Richard Berger, of Berlin, for the sculpture. The general design is what may be called the German classic, the composite order being used in the main colonnades. On an elevated main story it has a peristyle with pediments, and engaged round columns on two faces and pilastered treatment on two faces. The central lantern, insignificant in comparison with the size of the whole building, is weak.

Two other designs are illustrated by full models. One is Grace Church, at Berlin, by Prof. V. Spitta. The model is entirely carved in wood, which is unpainted. The style is Romanesque, which is typical of nearly all the modern churches of Germany, but cold, formal and orderly. Here in a country which is full of the most exquisite examples of the old church architecture of the eleventh and twelfth centuries, which, for want of a better name, we call "Romanesque," but they call "Rundbogenstyle," we have yet to find a modern architect who has caught its true spirit, unless we may except Prof. Freiherr H. Schmidt, of Munich. The general plan of Professor Spitta's church is cruciform, with central square tower and octagonal spire, flanked by

four square towers with spires, such as may be seen in some of the ancient churches of Cologne. It has very little sculptured ornament. Sectional drawings show polychromatic treatment of the interior. The whole shows the utter failure of the modern German idea of evolving a live architecture from scientific and grammatical formulas, however correct.

In the Emperor William Monumental Church, by Franz Schwechten, of Berlin, of which another model in unpainted wood is shown, we see an attempt to break loose from the formulas. Here we also have the Romaesque style, much better in detail than the last mentioned. But the architect has sought novel effects with towers and spires without any apparent reason for it. For instance: it has a western octagonal tower and spire, and small corner turrets growing from square to octagonal and ending in octagonal spires, all at the west end. The roof section of the nave is indicated on the front of the western tower which rises up as if built on the roof of the church. The building, though cruciform in its ground plan, yet has no central feature on the roof. Two small towers flank the east end and terminate in octagonal spires. East of these is the pentagonal apse covered by a ten-sided roof, which rises above the nave roof, suggesting still another tower. Low circular sacristies project beyond the apse. The model is accompanied by plans and sections showing polychromatic treatment of the interior.

There are two other architectural models in the German section showing façades only, and made of plaster. One is the front of the Imperial Institute for Patents, at Berlin, and the other the Imperial Insurance Institute of Berlin, both by A. Busse. They have little originality or merit of any kind.

We cannot leave the German section without turning again to the designs of Professor Schmidt, of Munich, Nos. 817 and 818. His Town Hall Tower at Passau is one of the best architectural water color drawings in the Exposition, and one of the few things in the German section showing any feeling for beauty and design. It is well worth study by American students as a piece of quiet and correct rendering. His St. John's Church at Darmstadt is another beautiful rendering of a modern Gothic church, full of the spirit of olden times. Elaborate detail is everywhere relieved and contrasted with simplicity in the larger parts. The tower and spire stand out boldly in front of the west end, without buttressing, the massiveness of the tower being shown by offsets on the exterior of the wall. The aisles of the church only are buttressed, and the plain nave and aisles are relieved by small octagonal turrets at the ends of the aisles.

The exhibit of American architects is naturally expected to show the condition of the art in our own country at the present time. Foreign visitors will form their estimate of our ability no less from this than from the buildings they may see in our great cities. That we have made for ourselves an architectural history and reputation since the Philadelphia exposition is not to be questioned. It has attracted the attention of connoisseurs in Europe and admirers in eastern Asia as never before, and our architects would have performed a duty to themselves and their reputation had more of the designs of our most celebrated buildings of this period been shown. As it is, the exhibition is strong in domestic and rural architecture only, and will show to our visitors from abroad much work of this kind that a cursory visit to our country will not reveal. As a whole it may be considered as a representative exhibit, because a few of those who may be considered as leading men have chosen to show their designs. Had this not been the case it would have been a hopeless failure, notwithstanding the vast number of pictures contributed. But, as has been said before, it shows the unsatisfactoriness of all architectural exhibitions *per se*. Notwithstanding this it gives us what has never been seen before, an exhibition free from all local influence. The remarkable part of it is that the Chicago architects, who have attracted so much attention by their works of late, have very little representation. They may have thought that their home works would speak for themselves, but a better reason may be that through years of great occupation they have given little attention to pictorial work, and do not have at command such drawings as can be conveniently hung on the walls to illustrate their designs.

The present condition of architectural design in this country may be summed up as follows: After the death of Richardson his works attracted more attention among the younger architects than during his lifetime. Richardson, who had been educated in the modern Renaissance of France, had made but slight attempts to use this style in his American practice. What he did in it was by

no means successful from an artistic point of view. His independent spirit when free from French surroundings would not allow him to longer adhere to the precedents of a school. He broke loose at first into an extravagant rendition of what the English call "laucet" Gothic. No arches were too sharp for him. And as nothing was gained by going to that extreme he began to study the round-arch architecture that flourished previous to the thirteenth century. All Europe furnished him models of great diversity. Hence his work was neither Byzantine, Romanesque nor Norman, but partook of the spirit of all. He evolved a style peculiar to himself, or perhaps more correctly stated, he did not evolve any style at all, but put his personality into designs that reflected a careful and enthusiastic study of the architecture of that so-called "dark" period between the fall of the Roman Empire and the evolution of the perfected pointed style of the thirteenth century. He did more than any man who ever lived in this country to found an architectural style. But subsequent events show that he did not found a school. He only obtained a following. It was, however, a larger following than that which any other master of architecture had obtained. But it was short-lived. Even his direct successors, Shepley, Rutan & Coolidge, have deserted Richardson in search of other gods. The principal reason of this decadence is that he had too many weak imitators and too few real disciples, so that much of the architecture dubbed "Richardsonian" has tended to bring the American round-arch style into a condition little short of the contemptible. As an exception may be mentioned the Ames building, Boston, of which an immense water-color perspective is exhibited by Shepley, Rutan & Coolidge. But their other design, the Art Institute of Chicago, which can also be seen now *in propria persona* by everyone who goes to the Exposition, is in what we will hereafter call the New York Renaissance style. And this is the case with several other large buildings on which their later reputation rests.

The Richardson influence may also be seen in the designs of Longfellow, Alden & Harlow, of whom Mr. Alden was his pupil; H. Langford Warren, and Brunner and Tryon.

The work of the late John W. Root has been by some ascribed to the influence of Richardson. This is a mistake. He was contemporaneous with Richardson, though he commenced later and lived longer. His work was so diversified that it could not be called a style. No one with less genius can be his follower, though all may profit by his example. He was a rationalist, and his rationalism was enlivened by the highest art. Some of his work may have resembled Richardson's, but it was only because they both loved and studied the same work of past ages. His last design, that which he made for the proposed Fine Arts building on the lake front, but never finished, was of this character. Pity that it should not have been used when the Art Institute, instead of the Exposition, undertook the project.

Richardson's work never received the stamp of fashionable society. It was too honest, too vigorous, and never superficial. While he was at his zenith, another movement was growing, and it had its center in the city of New York. It has given us what for want of a better name may be called New York Renaissance. It was commenced by followers of the French school, some of whom, like Richardson, were graduates of the École des Beaux Arts. But the greatest of all exponents of the French school, Richard M. Hunt, was never with it. The greatest of all designs in that school, and the greatest of Hunt's works, is the Administration building, at Chicago. The New York Renaissance is the school of fashion and caprice, like all French millinery, dashed with a touch of art. It may be seen extensively in the present exhibition. Those of its practitioners who were among the designers of the Exposition buildings were too much under the influence of the organization of the grand scheme for the Court of Honor to indulge in its fanciful vagaries. They were carried out of the swim by this and the consciousness of the serious nature of the work before them. But the influence of the New York school has extended to other cities, and we have it in frames on the walls of the Art Palace.

The largest space is given to the works of McKim, Mead & White. They exhibit a large number of drawings and photographs, illustrating designs of four of their principal buildings, two monuments, one interior and one gate. The Madison Square Garden, the Century Club and the Metropolitan Club at New York, and the New York State Headquarters at the World's Fair, are all well known and typical buildings. The latter speaks for itself, and the water color rendered by F. Hoppin does not do it

justice, being extravagant in color where the original is quiet. Far superior to it as a picture as well as design is the Washington Arch. The Metropolitan Club design is also an excellent water color. Both are drawn by Hughson Hawley.

Babb, Cook & Willard exhibit water colors of office buildings erected at St. Paul and Minneapolis, and a photograph of the New York Life Insurance building at Montreal, with illustrative details, also designs for the Manhattan Life building, New York, and an office building at Newark, New Jersey. These will rank as the highest exponents of the New York movement, showing a refinement of line and detail seen in no other works of the same school. The execution of the water colors is artistic in the highest degree.

H. J. Hardenberg's Waldorf Hotel, rendered in water color by Hughson Hawley, may be considered as one of the latest additions to refined and comfortable hotel architecture in New York. The water-color work on this design is among the best that has come from the eastern states, but not equal to the Washington Arch and Metropolitan Club for McKim, Mead & White. Other examples of New York Renaissance may be seen in the design of Edward H. Kendall for a seventeen-story building (water color by Hughson Hawley); the Germania Fire Insurance building, by Lamb & Rich (photograph from drawing); the Metropolitan Life Insurance building, by N. LeBrun & Sons (water color); the American Fine Arts Society building (pen drawing), by Hardenbergh, Hunting & Jacobsen, and the Mail and Express office building, by Carrere & Hastings, shown by a photograph.

The latter architects occupy a very large space with the designs for the Hotel Ponce De Leon, at St. Augustine, Florida, which is the most complete set of drawings in the American section. This unique building occupies quite as important place in American architectural history as it does in the experience of its designers. It was the first attempt at the creation of a Hispano-American style based on the work of the Spanish colonists of America. Another example may here be seen in the original design for the California World's Fair building, by A. Page Brown, of San Francisco. The latter is based on well-preserved models found in the remains of the old Mission buildings of California, which were erected between the middle of the last century and the first of this. The building as drawn and executed later is an improvement on the design, and can be judged by its own merits without regard to this bizarre drawing.

The exhibition has very little church work other than several of the competitive designs for the Cathedral of St. John the Divine, at New York. Of these the complete drawings of Carrere & Hastings (all in outline only) are very noticeable. The Renaissance style has been very successfully handled in its application to cathedral architecture. The masses are handled with great boldness, and the twin towers are imposing from every point of view. The design of William Halsey Wood, in the same competition, which was one of the four selected, may also be seen. The perspective only is shown. But imposing as it appears, from the meretricious rendering of the penwork it would not stand the ordeal of analysis. It is a bold conception — on paper, but would be very different in execution. The best of all the designs in this famous competition is that of R. W. Gibson, No. 2601, which shows the work of a master of the mediæval pointed style. No student of architecture should fail to study this splendid drawing while he has the opportunity.

This review would not be complete without mention of the designs and drawings of H. Langford Warren, especially the complete illustrations of the houses of S. A. Orr and C. E. Patterson, of Troy, New York. Mr. Warren has placed photographs alongside of his colored perspectives and creates a strong suspicion that the latter may have been taken from the former. Still the drawings are the best water colors on the walls of the American architectural exhibit, and the designs show the most advanced thought and highest artistic design in the domain of domestic architecture.

We cannot close this review of American architecture without a feeling that we have been unable for want of space to do justice to it. We have been obliged to pass over some of the best designs and drawings. Such drawings as the water tower at Fort Sheridan, designed by Holabird & Roche and colored by Paul Lautrop, will bear favorable comparison with any others in the American or foreign architectural sections. Much has been said about the methods of rendering architectural drawings by different nations. The American section, as might have been expected, is the most diversified in this respect. It partakes of methods that may be

seen in all the others. Here is an opportunity that will never again be offered to compare our methods with those of foreign nations, a subject that is always of interest to the profession. The American section is full of large drawings in the French manner, but they are mostly student work and some of them have been made in foreign schools. Too much valuable space has been given to them on the walls and they are not worth mentioning. But notwithstanding this, America has held her own in this international contest. England and Germany have sent the best that they can produce in competition with us. The same cannot be said of France, but there is enough from that country to make it creditable.

It is safe to say that such an international exhibit of architecture could not have been held at any previous time, but we now have the material to show the world that we can take the lead in architecture as we have done in the useful arts.

THE LANDSCAPE ARCHITECTURE OF THE WORLD'S COLUMBIAN EXPOSITION.*

BY FREDERICK LAW OLMSTEAD, LANDSCAPE ARCHITECT.

THIS paper has been written at the request of the Institute with the object of briefly accounting for such part of the preparation of the Exposition of 1893 as has come within the responsibility of the landscape architects, and as a contribution in this respect to a record of its genesis and development as a work of design. No comprehensive definition of the responsibility of the landscape architects has been recorded, and as to what is implied by the name of their office, different understandings are had. For this reason, something needs first to be said in explanation of the view which will herein be taken.

In the *Quarterly Review* of 1820, page 303, there is an article written by Sir Walter Scott, from which it appears that this master of words did not approve of the term "landscape gardening," which was then coming into popular use. His objection to it was that it tended to confusion between two classes of purposes, or motives of art, which could not well be blended together. To make this objection clear, it may be observed that the word garden comes to us from the same root with girdle, girth, garth and others to be found in every European tongue, all of which imply something limited, restrained and separated from what exists beyond or about it, or that is the cause of such limitation, restriction or separation. From remote times the word in its various forms, English, Spanish, French, Italian, Scandinavian, has carried with it this idea of limitation and exclusion. We yet speak of "garden flowers," meaning certain flowers exclusive of others. Taking up a book with the title "A Garden of Verse," we should understand it to be a selection of verse. Being told at a farmhouse that one of the family of the house is "in the garden," no countryman would think that this meant either simply out-of-doors or in a stable yard, or an orchard, or a common cultivated field; a grove, a park, or a pasture. The word implies reference to a limited, defined and exclusive space, and it may be used in this way antithetically to the word landscape, the application of which is so comprehensive that it may take in houses, lawns, gardens, orchards, meadows, mountains, and even the sky, with the stars to the remotest nebulae.

The word landscape is often used by accurate writers interchangeably with the word scenery, as, for example, by Gilpin in his series of works on the "Scenery of Great Britain"; also by Hamerton in a recent treatise on "Landscape" written from the point of view of a landscape painter.

A distinction implied by the word landscape unfitting it to be compounded with the word garden is indicated by Hamerton when he says that: "Much of the comprehensiveness of natural scenery depends upon the degree in which mass appears to predominate over detail. In perfectly clear weather a mountain does not look nearly so grand as when * * * its nearer details are only partially revealed amid broad spaces of shade. So it appears with other elements of landscape, they lose in comprehensiveness as the details become more visible." Thus, for the enjoyment of landscape beauty, we are to regard the detail of what we see mainly as it affects the character and expression of masses, these masses being considered as elements of composition and perspective. On the other hand, for the enjoyment of garden beauty as such, we must scrutinize objects of detail discriminatingly. We must see roses as roses, not as flecks of white or red modifying masses of green.

Lastly, to understand aright the term "landscape architect," we must bear in mind that the word architecture is not limited in application to works of building. The Almighty is referred to as the "Architect of the Universe." Plutarch writes of the architecture of a poem, meaning the plotting of it. "The architect of his own fortune" is an old proverbial term yet commonly used in our newspapers, and is applicable as well to a banker or a miner as to one whose fortune has been made by directing works of building.

In view of the considerations thus presented, when the office of Landscape Architects to the Exposition was created, what, in

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the absence of specific instructions, was to be understood as the leading duty of that office? The answer assumed by those to whom the title was applied was that their leading duty must be to reconcile the requirements of the problem which the directors had before them in respect to buildings and means of access to, and means of communication between, buildings, with the requirements of pleasing scenery, and of scenery which would be pleasing, not because of the specific beauty of its detail, but because of the subordination and contribution of its detail to effective composition of masses as seen in perspective.

Adopting such a view, the first thing to be noted in an account of the landscape architecture of the Exposition is this: Immediately after the settlement in the directory of the question of its own organization and rules, the question of a choice of sites came up, and it soon appeared that the debate of it was likely to be inconveniently prolonged. Thereupon, the suggestion was made that expert counsel upon it might be desirable, and an inquiry was addressed to our office as to the terms upon which such counsel could be had. Upon receipt of our reply by telegraph, we were asked to come to Chicago as soon as practicable. We did so by the next train, and upon arrival were presently taken to examine in succession seven proposed sites; three on the lake and four inland.

The country immediately about Chicago is flat and mainly treeless, except that in a few places there are small areas of dense woods. Its sub-soil generally, and its surface soil largely, is a tenacious brick-clay. The climate in the spring is severe under successive alterations of southerly and northerly winds. The latter sweeping over the icy lake from the semi-arctic regions north of Lake Superior, the demand upon energy of vegetation is apt to be peculiarly trying. Accordingly the choice of a suitable site was necessarily to be a choice of difficulties. Of the seven sites to which our attention was called, there was not one the scenery of which would recommend it if it had been near Boston, New York or Philadelphia. After our first general review of the premises, we adopted the opinion that nothing was to be found on any of the inland sites that could be weighed against the advantages, in respect to scenery, of the lake shore. Next, as to sites on the shore, we concluded that, provided suitable means of transportation for goods and passengers between the town and the place could be secured, the northernmost of those proposed would be the best. By comparison with the most nearly competing site, it would require less outlay to prepare the ground and establish suitable means of interior transportation, water supply, drainage and sewerage; the great marine commerce of Chicago would be passing in review before it at a suitable distance for spectacular effect; an arrangement of buildings simpler and much grander than elsewhere would be practicable; and the buildings would have a much better setting and framing of foliage provided by standing woods, fairly vigorous and of sufficient height to serve as a continuous background.

But a committee of the directory, taking up the question of transportation between this site and the central parts of the town, advised us that the railroad companies concerned could not be induced to make the outlay of capital required for such arrangements of transportation as we thought needful. Thereupon, we fell back on the southernmost of the sites proposed on the lake, which went by the name of Jackson Park.

Our report favoring this place excited much remonstrance. Opposition to it was concentrated in favor of an inland site near by, known as Washington Park, the advantages of which were thought to be so great and so obvious that a leading member of the National Commission assured us that after an inspection of the two sites in question, not one vote in ten could be got for our proposition. In the few days that intervened before the commission met, we gave the reasons of our choice as well as we could in private conversation, but I do not think we accomplished much. In the end the commission accepted our advice, not because a majority of its members understood the grounds of it, but because they could not be led to believe that we should have given this advice without having, as experts, sound reasons for doing it. The result was due to respect for professional judgment. Comparing this experience with some of my earlier professional life, I can but think that it manifests an advance in civilization.

Unquestionably, to common observation, the place was forbidding. At different periods in the past sand bars had been formed in the lake a few hundred feet from and parallel with the shore. The landward one of these, gradually rising, would at length attain an elevation above the surface of the water. There would then be within this bar a pool accurately definable as a lagoon. Gradually, in this case, lagoons thus formed had been filled nearly to the brim with sand drifting from the outer bar, and had been turned into marshes. Thus nine-tenths of the surface of the site, or, in fact, all of it that had not been artificially made otherwise, consisted of three ridges of beach sand, the swales between which were more or less occupied by boggy, herbaceous vegetation. Upon the innermost two of the ridges vegetable mold had gathered and trees had sprung up in scattered groups. The most important of these trees were oaks. The situation being extremely bleak, the soil subject to be flooded, and the sandy subsoil water-soaked, these had had an extremely slow growth. The largest were about forty feet in height. They were very feeble and many of them dilapidated through loss of limbs broken off by gales from the lake.

A more serious difficulty than any involved in this consideration was found in the circumstance that the level of water in the lake, and consequently in the marshes, was fluctuating, and this

not only from day to day, as would be determined by winds at a distance drawing it off or backing it up, but its average level varied from year to year. An engineer who had been in charge of operations upon the lake shore, and who had had occasion to study the matter with accuracy, advised us that the probabilities were that in 1893 the average elevation of the surface of the lake would be four feet higher than it was at the time when we were studying the plan, or than it had been during the year before. It will be readily understood how difficult it became to forecast landscape effects in a region of low shores, without knowing within four feet what the level of the water was to be by which these shores were to be washed.

The Jackson Park site had, twenty years before, been selected as a site to be reserved for a public park. If a search had been made for the least parklike ground within miles of the city, nothing better meeting the requirement could have been found. It will, then, naturally be asked: Why was such a place fixed upon for a park? I have not the specific knowledge required for an answer, but I may mention that it is a common thing with town governments when they find bodies of land which, because of their special topographical condition, are not favorable to the ends of dealers in building lots, to regard them as natural reservations for pleasure grounds; to label them accordingly on their maps, and to refrain from ordering streets to be laid out across them. This is not peculiarly a western custom. The sites for the Central Park, for the Morningside Park, for the Riverside Park, for the Mount Morris Park, for Tompkins Square, and, no doubt, for other public grounds in the city of New York, were thus selected. So was the site of the public ground in Boston, officially called the Feus, but popularly known as the Back Bay Park. Sites having been thus obtained, landscape architects are asked to contrive how pleasure grounds can be made of them. It has been so, I believe, in London, conspicuously in the case of Battersea Park. And it may be remembered that the opportunity of making the Tuileries Garden in Paris occurred because, while the city had been building out about the place, the necessary ground had been held in reserve, while the clay which it contained was being removed to be used for making roofing tile. In the Millennium it may be hoped that landscape architects will be employed to select land with regard to the specific purpose for which it is to be used. When that is the case, the making of a park will be less costly than it is at present.

At the time the land and water of Jackson Park had been taken for a public park, I was in partnership with Mr. Calvert Vaux, and we were asked to devise a plan for making it available for a public pleasure ground, together with the site now known as Washington Park and the strip of land between them, now known as the Midway.

As the starting point for the development of the proposition which we then made, the suggestion was adopted that dredging boats might be employed, to begin at the lake and first reopen the old lagoons, taking the excavated material to be lifted out of their bottoms to form the basis of higher, more undulating and varying banks resting on the old sand bars; next, to move through the Midway and so on to the inland park site, everywhere lifting out the material needing to be removed in order to open a channel in which they could float, and so shifting this material to one side or the other as to provide the base of varying shores, these shores to be afterward covered with soil and landscape masses of vegetation.

When Jackson Park was chosen as the site for the World's Fair the general landscape design of no part of the plan of which the expedient I have described was the germ, had been carried out. In the Washington Park part of the scheme a good deal had been done following the leading outlines of the plan, but with a modeling of surfaces and a choice of material and disposition of foliage looking to condition of detail rather than of masses, and with entire disregard of the elements of mystery through effects of aerial perspective and the complicated play of light and shadow, and of reflected tints, in extended composition.

In the nominal carrying out of plans in the preparation of which I have had part, there have often been sacrifices of the designs of these plans which have been mortifying and disappointing. In no other case, however, had the disappointment been so great as in this. Nowhere else had the opportunity for forming agreeable scenery been so lost. But in the lagoon district what little had been done had not been done unwisely.

Coming to consider what might yet be done with this same lagoon district suitably for the purposes of the Exposition, the question at once came up how far the general theory of the old plan for a public pleasure ground to be formed upon it could be made available to the special purpose of the Exposition.

As a result of this consideration, we came to the conclusion that the element of the waterways in the original plan being carried out, retaining walls being built in various places for holding up the excavated material to be piled upon the shores, so that in these places terraces would be formed, the necessary buildings of the Fair could be advantageously distributed upon the surrounding sandy ridges.

Before making their formal report favoring the choice of Jackson Park for the site of the Exposition, the landscape architects took counsel with Messrs. Burnham & Root, presenting their views of the manner in which, this site being adopted, it should be used, and obtaining confirmation of them, more especially with reference to the expediency of distributing the needed large buildings upon the sandy ridges and of spreading out these ridges suitably for the purpose by retaining walls to be backed by the excavated material from the lagoons. It may be observed that to accomplish

this purpose in various localities where otherwise lagoons with shores of a natural character would become unsuitable for boats, it was thought best to give them the character of canals; that is to say, to make them formal and give their banks, which would necessarily be walls, an architectural character in harmony with the buildings to which, in a near perspective view, they would form foregrounds.

Mr. Burnham in his report of operations, addressed to the president of the Exposition, on October 24, 1892, thus describes the process of forming the first complete graphic sketch illustrative of the design:

"After consideration of sketches made on the ground * * * a crude plot, on a large scale, of the whole scheme was rapidly drawn on brown paper, mostly with a pencil in the hand of Mr. Root, whose architectural prescience and coordinating talent was of invaluable service to the result. The plot, formed in the manner described, contemplated the following as leading features of design: That there should be a great architectural court with a body of water therein; that this court should serve as a suitably dignified and impressive entrance hall to the Exposition, and that visitors arriving by train or boat should all pass through it; that there should be a formal canal leading northward from this court to a series of broader waters of a lagoon character, by which nearly the entire site would be penetrated, so that the principal Exposition buildings would each have a water as well as a land frontage, and would be approachable by boats; that near the middle of this lagoon system there should be an island, about fifteen acres in area, in which there would be clusters of the largest trees growing upon the site; that this island should be free from conspicuous buildings and that it should have a generally secluded, natural sylvan aspect, the existing clusters of trees serving as centers for such broad and simple larger masses of foliage as it would be practicable to establish in a year's time by plantations of young trees and bushes. Because the water in the lagoons would be subject to considerable fluctuations, it was proposed that its shores should be occupied by a selection of such aquatic plants as would endure occasional submergence and yet survive an occasional withdrawal of water from their roots. Time pressing, the pencil, large-scale, brown-paper plot above described with a brief written specification, almost equally sketchy, was submitted to the corporation and, after due consideration, on December 1, 1890, was adopted as the plan of the Exposition."

The question may be asked: In what degree at this early period was the result forecast which has since been attained in respect to the effect of boats, bridges and water fowl and overhanging foliage on the lagoons? The answer is that it was quite fully anticipated in a general way. The effect of the boats and water fowl as incidents of movement and life; the bridges with respect to their shadows and reflections, their effect in extending apparent perspectives and in connecting terraces and buildings, tying them together and thus increasing unity of composition, all this was quite fully taken into account from the very first, and the style of boats best adapted to the purpose became, at once, a topic of much anxiety and study.

The next important step in the progress of the enterprise to which reference is here necessary, was that taken by Mr. Burnham which resulted in the meeting at Chicago of the advisory board of architects, with Mr. Hunt as its chairman. The landscape architects were made members of this board, and their general plan came up for critical review. Many suggestions for its amendment were made by the building architects, but in nearly all cases counter suggestions were offered by others of them, and the balances of advantages being weighed, the result was at length a cordial and unqualified approval of the plan as originally presented, and this was duly expressed by a resolution and report to the commission.

The general plan was, however, afterward modified in certain particulars. These particulars were the abandonment of a proposed outer harbor for which the landing pier now seen was substituted; the introduction of the Peristyle, and of the Colonnade at the end of the south transept of the main court. All of these changes resulted from suggestions of the building architects, cordially welcomed by the landscape architects.

The general plan was later modified in one matter, to its great injury. Two of our firm had visited the last World's Fair in Paris, while it was in preparation, under the guidance of its landscape architect. The third of our number, Mr. Codman, had passed several months in Paris while the Fair was in progress. We all thought, and Mr. Codman was particularly strong in the conviction, that it was an unfortunate circumstance that visitors so generally entered the Paris Exposition at points and by ways not adapted either to give them a grand impression, or to provide a convenient point of dispersal for systematic observation. This in Paris grew largely out of the situation of the Exposition. There was no similar difficulty in the Chicago situation, and the very first step in our revision of the old park plan in adaptation to the requirements of the Fair was to fix upon a focal point of interest to be regarded as the center of design, and to so place this center that conveyances of all kinds, by land and by water, the railways and the boats, both those of the interior and those of the exterior, should conveniently discharge visitors into it and receive visitors from it. That it should thus be made a place of general exchange, a place for obtaining information and guidance, as well as a place of departures and returns, a spacious court was designed; the Administration building was placed in this court; the buildings likely to be most frequented were placed so that they would open from it; the intramural railway was to have its principal

station in it; the whole interior water system was planned with a view to easy connection with and through it by the small boats. All railways and all steamboats were to conveniently receive and discharge passengers through it. A union station was provided for with the latter object in view. We intended that the Administration building, which stands in this court, and this railway station, should contain the principal provision of guides and wheel-chairs, and the central office of a system of offices of "public comfort," to be in telephonic communication with it. We did all in our power to have this arrangement carried out. The failure to carry it out has added, in my opinion, to the cost of the Exposition, and deducted much from its value. In reporting to you professionally, I have thought it necessary to say this, not in the least in a complaining way, but that it may go on record for the benefit of those who may have to deal hereafter with a similar problem. You will ask why we were unsuccessful? I do not fully know. I can only answer that our failure took the form of a failure of prolonged negotiations with the Illinois Central Railway.

At the period when the general plan was formed it was impossible to have building masses definitely in view except in the case of a few of the larger ones. Our instructions as to these were that a classification similar to that of the last Paris Exposition was to be contemplated, but that the buildings required under the classification would be a third larger than the corresponding buildings in Paris. We presumed that additional buildings would be wanted and that they would be of smaller but of varying size. For these we presumed, but as yet undetermined, smaller buildings, we held three large spaces in reserve. First, for such as would be wanted for the live stock exhibits, an area at the south end; second, for the distinctive office and "headquarters" buildings of the national and state committees, an area at the north end; third, for miscellaneous exhibition buildings of a smaller class, the strip of land called the Midway. We calculated that restaurants would be established in the great Exposition buildings, and that the terraces of some of these buildings would be occupied to a considerable extent with refreshment tables and chairs, under awnings. We did not suppose that there would be many small buildings scattered about between the main great buildings, nor do I think that it was at the outset contemplated by those in direction that there would be. Afterward they were seen to be financially desirable. Also, it is to be noted that it was our original intention and that this intention was fully set forth, to have what has since been called the Wooded Island, occupying a central position, held free from buildings and from all objects that would prevent it from presenting, in connection with the adjoining waters, a broad space, characterized by calmness and naturalness, to serve as a foil to the artificial grandeur and sumptuousness of the other parts of the scenery. After a time demands came for the use of the island for a great variety of purposes, and at length we became convinced that it would be impossible to successfully resist these demands. When we reluctantly reached this conclusion, the question with us was which of all the propositions urged, if adopted, will have the least obtrusive and disquieting result? Probably we were fortunate in securing the occupation of the island only by the temple and garden of the Japanese, and for the display of horticultural exhibits. Nevertheless, we consider that these introductions have much injured the island for the purpose which in our primary design it was intended to serve. If they could have been avoided, I am sure that the Exposition would have made a much more agreeable general impression on visitors of cultivated sensibility to the influence of scenery.

With regard to the subsequent occupation of ground by smaller structures, especially such as are of the class called pavilions and concession buildings, many of these have been inserted without consulting us; places being often given them in which they intercepted vistas and disturbed spaces intended to serve for the relief of the eye from the too nearly constant demands upon attention of the Exposition buildings. As a caution to those who will manage the next affair of a similar class it is best to record the opinion that the effect of these little structures among the larger has been bad. I can best show our judgment of it by saying that it had been our original intention to use on the grounds a great deal more of gardening decoration in various forms than we have. We had, at considerable expense, provided materials for the purpose, largely in the form of plants propagated and kept last winter under glass. But at last when the time approached for making the intended use of this material, the spaces of the Exposition grounds not occupied by the larger building masses and trees appeared to us to be everywhere already a great deal too much divided and disturbed by little features intended to be more or less of a decorative character. So much was this the case that, after consideration, and with reluctance, we concluded that our intended floral decorations would add so much disquiet to the already excessive disquiet of the scenery, and so detract from the effect of the more massive elements, that they must be abandoned.

One other modification of the original plan must be referred to. The administration at one time contemplated the introduction of a branch railway by which Illinois Central trains would be taken from the Midway to the station upon the Main Court through the Fair ground. To give room for this branch road we were required to change the position assigned to the Horticultural building; reduce the breadth of the lagoon and modify the outlines of the island. Afterward the railway project was abandoned, but in the meantime work had been done compelling adherence to the unfortunate revision of the shores. It will readily be seen that the cramping of the water at this point has been a considerable loss, and that had the advances and recesses of the foliage masses

opposite the Horticultural building been much greater than they are, a more picturesque effect would have been obtained.

Passing from matters of design to matters of construction: as to the more bulky preliminary operations of dredging and sub-grading, they were mostly affairs of large contracts, and, while we were constantly consulted, the preparation of details and the superintendence of the contractor's work was made by the director of works mainly the duty of the engineer corps. The same was the case in a still greater degree with respect to the often extremely difficult and delicate matters of drainage, sewerage and water supply throughout the grounds. It is only necessary, then, to say with reference to these matters as well as to those of buildings, that our coöperative relations have been of a character to be looked back upon with pride and congratulation. Really, I think that it is a most satisfactory and encouraging circumstance that it could be found feasible for so many men of technical education and ability to be recruited and suitably organized so quickly and made to work together so well in so short a time. I think it a notable circumstance that there should have been so little friction, so little display of jealousy, envy and combativeness, as has appeared in the progress of this enterprise. Too high an estimate cannot be placed on the industry, skill and tact with which this result was secured by the master of us all, yet I venture to say that, considering the impromptu way in which Mr. Burnham had to go to work, and the extremely varied antecedents in the matter of education, custom and habit of those through whom he had to operate, equal success would have been possible only in a country which was, in a high degree socially, as well as politically, a republic.

I have only to add a few statements in respect to that part of the work of which the landscape architects were placed especially and more independently in general superintendence.

On this point I will observe, first, that we early recognized the importance of not entering upon undertakings which might lead to the requirement of outlays, the reasonableness of which could not be made plain to the directory, or which we could not be confident that in the progress of the work the financial department would fail to sustain. Also, we took well into account that various resources that would be available in any large capital of Europe would not in Chicago be at our command, and further, that we should have to push much of our work very rapidly with unknown and untrained men. After completing operations of grading, draining and the supplying of suitable soils we should have, for much of the ground, but one fall and spring for planting operations; for none of it more than two; and it is rare that a weak and sickly appearance can be avoided in freshly made plantations. We considered also, that we had to deal with many inexact known conditions—conditions, I mean, of climate—as of the occurrence of rains and floods and sudden inroads of severe frosts in the planting season; conditions of uncertainties as to how the bottom and banks of our excavations would behave; as, for example, how they would be affected by subterranean springs. To illustrate this latter hazard, I will mention that at important points after our channels had been excavated there were movements, slips and uprisings of the sandy bottoms, forming shoals, and, as the result of the subsequent redredging of these places, adjoining banks and slopes slid away and caved off. Through this process, and from the effect of ice which formed to the depth of two feet along the shores and remained late in the spring, we lost, in spite of all precautions, many thousand water plants that had been collected, propagated and set with great painstaking.

From the start we took all these hazards and difficulties into account and devised our design at all points so that success in what we aimed at would not greatly depend on exact and defined local particulars, but on masses and broad general conditions.

One main difficulty to be considered was that of making sure of the clothing of several miles of newly made, raw sandy shores with a clean, graceful, intricate, picturesque, green drapery, varied in tints and pleasing in its shadows and reflections. We knew that we could depend but little on the ordinary commercial agencies for the materials required for this end, and within a week after the work was put under our direction we had begun the gathering, by special collecting agencies, of the plants required. We placed our dependence mainly on two classes of these: First, willows, chiefly of the shrubby sorts, but in large variety; second, herbaceous, bog and water side plants, principally such as are commonly known with us as flags, cat-tails, rushes, irises and pond lilies. Some of these were propagated on the Fair grounds; a few were bought from nurserymen and florists; much the larger part was obtained by parties organized and sent out for the purpose to various localities on the shores of lakes, rivers and swamps in Illinois and Wisconsin.

Altogether, we have planted on the shores of the lagoons one hundred thousand small willows; seventy-five large railway platform carloads of collected herbaceous aquatic plants, taken from the wild; one hundred and forty thousand other aquatic plants, largely native and Japanese irises, and two hundred and eighty-five thousand ferns and other perennial herbaceous plants. The whole number of plants transplanted to the ground has been a little over a million.

Our chief executive in the immediate direction of working operations has been Mr. Rudolph Ulrich. He had never been employed under our direction before, but we had seen the results of rapid work carried on under difficulties by him and had formed a good opinion of his abilities to meet emergencies. On the very day of our appointment we telegraphed across the continent to ascertain if he would be available. Our message reached him at a

moment when he happened to have just left a California work in which he had been engaged, and he was at once secured. It has been our policy to encumber him as little as possible with directions in detail, but to explain to him our aims and trust largely to his discretion as to particulars. He has entered admirably into the spirit of the design, and the zeal, activity, skill and industry with which he has labored to carry it out cannot be too highly esteemed.

INTERESTING WORLD'S FAIR EXHIBITS.

THE visitor to the World's Columbian Exposition whose interest centers in the architectural display, is first attracted to the great Manufactures and Liberal Arts building, where in the northwest corner, on the main floor, he finds a large space devoted to exhibits of building materials. A representative of THE INLAND ARCHITECT found here the exhibit of the

NORTHWESTERN TERRA COTTA COMPANY,

a factory which claims an output equal to that of any two other factories combined. Their display at the Fair is tastefully arranged in a neat booth. It consists not only of their standard terra cotta, but also the semi-glazed work introduced by them some years ago. This work is made in six colors—brown, red, buff, Bedford gray, salmon and white—and resembles brick. It is non-absorbent and consequently always clean. It is a little more expensive than brick but is cheaper than stone, and is therefore in great favor as a permanent building material.

Near by is the exhibit of the

PIONEER FIREPROOF CONSTRUCTION COMPANY.

Their display attracts the attention of almost every visitor to Section D, and well it may, as it is an excellent exponent of the modern art of fireproofing in its perfection. The Pioneer Fireproof Construction Company is, as its name implies, a leader in the important work of fireproofing buildings. Twenty-one years ago this company first introduced its material into a large office building at the corner of Dearborn and Washington streets, Chicago, and since that time they have furnished a large number of office buildings in the city. The great Chicago fire of 1871 gave an impetus to fireproof construction that was before unknown. It was then demonstrated that nothing but clay products would withstand the attacks of fire, and accordingly the Pioneer Fireproof Construction Company brought out their non-combustible floors and partitions. It was seen that floors to be fireproof must be built with a combination of steel or iron beams and non-combustible filling, entirely inclosing the beams and covered over with cement concrete. This company, as a result of thought, study and experimenting, now displays for the consideration of those interested their latest improvement in floor arch construction, which is exceedingly strong and at the same time light. They make this arch nine, ten, twelve and fifteen inches deep, weighing twenty-five, thirty, thirty-five and forty-one pounds per square foot, respectively. They also manufacture the old-style arch in all sizes up to fifteen inches in depth.

Along the east side of the great Manufactures building, on the main floor north of the east main entrance, in Sections N, O and P, are to be found a multitude of architectural and kindred exhibits. Here is the really elegant booth of

A. H. ANDREWS & CO.,

containing the cream of the manufactures of this well-known firm. A feature which is only an incident of their wonderful display, but which attracts the attention of every visitor, is the Andrews metal chair. This chair, we are informed, is having the great sale that its beauty and utility merit.

THE H. W. JOHNS MANUFACTURING COMPANY

is represented at the World's Fair by no less than six separate exhibits, as follows: General exhibit in the Manufactures building, northeast corner of gallery; paint exhibit, main floor; machinery, in Mines building; cabinet exhibit, also in Mines building; insulating exhibit, in Electrical building; pipe covering exhibit, in Machinery hall. Their exhibits in the Manufactures building are of especial interest to architects. The paint exhibit on the ground floor, north of main hall, in Section H, Block 1, is a creditable showing of the large and complete line of paints, colors, etc., manufactured by this house. In the gallery, Section F, Block 14, are shown their asbestos roofing and building materials. Our space will not permit a detailed mention of the extensive exhibits of this house, which must be seen to be appreciated.

Another exhibit in Section H, of striking beauty and interest, is that of

THE WINSLOW BROTHERS COMPANY

in Block 3. The works of this company are thoroughly equipped for the production of every description of ornamental and architectural iron, bronze and brass work, and for the special finishes of electro-plating in bronze, copper and silver; the Bower-Barff rustless process; the electro-graphic or galvanoplastic process; solid aluminium for newels, rails and elevator fronts; duplex electro-bronze work for outdoor purposes; store fronts, railings, grilles, etc.; fire gilding for interior and exterior work. The Winslow Brothers' exhibit consists of a gateway, newel posts, grilles, brackets, frames, railings, etc., each piece being worthy of a separate notice. We have space to mention only the great gate, which is said to be the largest and finest piece of wrought-iron work ever produced in this country. The gate is 33 feet

high, 23 feet wide, and weighs $7\frac{1}{2}$ tons. Its every part is wrought by hand, the only tools used being a forge, an anvil, a hammer and a pair of tongs. The style is Rococo. Each flower and bud is shaped out of a solid body of metal. The masks and faces are hammered out of a solid plate of steel $\frac{5}{16}$ of an inch in thickness, no form or mold of any kind being used. The gate is a purely American product, a monumental witness to the intelligent skill and thoroughness of the American artisan.

DEXTER BROTHERS' SHINGLE STAIN.

This well-known firm has a characteristic display of their English shingle stains which have long been so celebrated; also, their pure ready-mixed paints, which are designed for use in appropriate combinations with the stains. The Dexter Brothers' stain is made of the very best English ground colors. The manufacturers claim that their stain not only will not wash off nor turn black, but that it will not freeze. They are now using a combination of linseed and vaseline oils in their stains, having discovered that vaseline oil preserves not only the shingles, but the color of the stains. The very important matter of harmony of colors has received special attention in a table of suggestions, giving the proper colors of stains for roof and side shingles and of paints for clapboards, trimmings, blinds and sashes. Some twenty combinations are given, by the use of which the body of the house may be painted red, green, yellow or white, and a perfect harmony in color in the shingles and trim will be secured. This table will be found of great value to architects who desire to specify the exact shade of color wanted in the completed work—something difficult to accomplish where the color sheets of manufacturers vary so widely. For instance, by specifying Dexter Brothers' stains and paints, Nos. 4 and 7 of the former for the roof and side shingles, and colors liver red, ivory white, bottle green and ivory white for the clapboards, trim, blinds and sashes, respectively, we have at once a combination absolutely definite and of a character to please the eye.

F. WEBER & CO.

This well-known Philadelphia house has a fine display of artists' materials in Section G, main floor of the Manufactures building. Their oil colors are noted for strength, brilliancy and durability; qualities which have secured for them prize medals at the exhibitions at Cincinnati, 1870; Vienna, 1873; Franklin Institute, Philadelphia, 1874; Centennial, 1876; and New Orleans, 1884. The adjustable drawing table recently brought out by this firm is a convenient accessory to the drafting room. It is simply and durably constructed in such a manner as to admit of being immediately adjusted for either sitting or standing work. While sitting, the board can be adjusted readily to any desired inclination without change of position on the part of the draftsman. The drawing tools are held in a box screwed to the trestle.

THE STANDARD MANUFACTURING COMPANY,

of Pittsburgh, Pennsylvania, has space in Section N, Block 4. They display here samples of their celebrated bath specialties. Their pavilion is located not far from the east main entrance of the Manufactures building and should be visited by everyone interested in baths of the best quality. The Standard Manufacturing Company make over fifty shapes and sizes, all of which, on account of the limited space at their disposal, could not be shown at the Fair. Enough, however, is on exhibition to indicate the quality of the work turned out by this house, which is strictly first-class. In all the shapes and sizes of their manufacture they have but one quality, which is the best that skill and experience can produce.

Also in Section N, Block 4 is the exhibit of the

STEEL-CLAD BATH COMPANY,

of Detroit, Michigan. The steel-clad bath, as its name implies, is made entirely of metal except the rim, which is of polished cherry, or other ornamental wood. The outside shell is of steel and the inside lining of planished copper. It will not decay, rust nor corrode, and is always absolutely clean and free from smells. The bath is supported by four ornamental iron feet, and the exterior is susceptible of being very handsomely decorated. They are made in three sizes, and of both the French and Roman patterns. So well proportioned and compact are they that they weigh only about 100 pounds, thus doing away with any possible objection on the score of weight. A basin attachment is supplied also when desired. The device known as Booth's combination fitting as applied to the wash basin allows the entire water supply to be fed into the basin or into the bath as desired. Hot and cold water is regulated by two side valves. The same arrangement is applied to the shower connection.

THE HENRY DIBBLEE COMPANY.

This company has a unique and beautiful exhibit of fine cabinet work, furniture, mantels and mosaics near the main east entrance of the Manufactures building. The plan of their display is to show the interior of an office room and two rooms in a private residence. All the furniture and office fittings are in their best style. The carving and upholstery are elaborate and tasteful, the latter characteristic being the better of the two in these days of over-ornamentation. The influence of special designs is everywhere apparent in the work of the Henry Dibblee Company, and it is this artistic originality that gives it much of its attractiveness and worth. Their display in the Manufactures building is by no means the extent of the exhibit of the Dibblee Company at the Fair. No less than thirty-one exhibit structures were designed by

them for exhibitors in the various buildings. Prominent among these are the entire exhibit structures of the General, Brush, Fort Wayne and Siemens & Halske Electric Companies in the Electricity building, and the entire furniture in the Pennsylvania and Nebraska State buildings. They are also sole Chicago representatives of Maw & Co., Jackfield, England, whose exhibit is to be found in the British section of the Manufactures building. Some of the recent special work of this company in Chicago has been furnished for the Chicago Athletic Association building, the Chicago Club, and the Chicago Auditorium Hotel Annex.

The Henry Dibblee Company are also sole Chicago agents for

EDWIN A. JACKSON & BROTHER,

of New York, whose ventilating grate is exhibited in Section O, Aisle 3. This grate is a marked improvement over the old style of fireplace, in which there was an extravagant waste of heat. The Jackson ventilating grate has been in use for more than fifteen years. It has now been brought as near perfection as possible, and is justly regarded as an ideally perfect grate. Cold air is admitted from outside the house and comes in contact with several thousand square inches of heating surface back of and above the fire. It is then admitted to the room or allowed to pass upward to heat a room above. A single grate will heat two or more rooms and affords perfect ventilation at all times.

THE AMERICAN RADIATOR COMPANY.

The booth of this company is on the east side of the Manufactures building, and will be readily recognized by the visitor, as it is a beautiful inclosed pavilion, brilliantly lighted by electricity. Within are to be seen the best products of the American Radiator Company's factories, the largest makers of radiators in the world. The exhibits of this company are not confined to the Manufactures building, as their radiators are used exclusively in all the World's Fair buildings. But the display to be seen in Section O is so comprehensive that it deserves special mention.

The National, the Perfection, the Detroit Ornamental and Detroit Plain, the Ideal, the Perfection Flue and the Perfection Special Cast-iron Top Radiators are designed for both steam and hot water. The National Single Column Radiator is for steam only. The Ideal Direct Indirect Radiator is designed for ventilating as well as warming, and a similar design is made on the Perfection, National and Detroit patterns. The radiators of the American Company are made in lengths of from five to eighty inches, and from twenty to forty-five inches high. Each section represents a length of $2\frac{1}{2}$ inches, and the standard height is 38 inches, giving a heating surface of four square feet to each section. A feature which adds greatly to the beauty of the American radiators is their tasty ornamentation. The visitor to their exhibit is at once impressed with the fact that a radiator may be highly ornamental as well as useful.

THE GARDNER SASH BALANCE COMPANY

furnish an instructive object lesson in sash hanging by their exhibit of aluminium bronze and steel sash ribbon, pulleys and attachments. Our readers are so familiar with the merits of these goods, and the success attending their introduction has been so marked that any description of them in this connection would be almost superfluous. It might be thought that no great ingenuity could be shown in such a small matter as a sash and weight attachment, yet in the Gardner ribbon these points are of especial excellence. The ribbon is held in position by being passed around a wooden plug, the object being to prevent any possibility of abrasion and breakage. This is but one admirable feature of the Gardner balance as exhibited at the Fair.

On the east gallery are four exhibits of stained glass that are so arranged as to attract the attention of all visitors. The first as we move south is that of

THE WELLS GLASS COMPANY,

who show an extensive line of their goods. Their large work is best seen from the center gallery, as no hood has been erected on the east, and the light effects on that side are consequently very imperfect. The view from the center of the building is very fine and is creditable indeed to the Wells Company. Besides stained glass, this company exhibits also a very complete stock of beveled and plate glass mirrors, in the manufacture of which they excel. The attendant in charge informed our representative that they use for architectural work the glass of the Opalescent Glass Company.

M'CULLY & MILES

exhibit stained glass and decorations in Colonial and modern French styles; also glass and marble mosaics. The art of ornamental and stained glass decoration has taken such a wide range of late, including, as it now does, an extensive line of residence work, that it is well for architects and others to familiarize themselves with its details as far as possible. The exhibit of McCully & Miles is an excellent example of the uses of glass in domestic architecture as well as in ecclesiastical work. The distinction between the two is narrowing, perhaps, rather than widening, but in general it is understood that stained glass is applied more appropriately to churches and cathedrals than to residences. For the latter there are innumerable designs in colored, beveled, crystal or silvered glass, to suit all tastes and every occasion.

FLANAGAN & BIEDENWEG.

These well-known glass manufacturers have prepared an exhibit which covers a wide range of ornamental glasswork in all

qualities, from the simplest domestic work to hand-painted windows for high-class residences, churches and public buildings. Flanagan & Biedenweg have the essentials of long experience, artistic and skilled workmen, and a well-equipped factory. With these elements their success is certain. Their novelty department is unique. It comprises the manufacture of any desired novelty in glass, such as French mirrors with special engravings, show cases made entirely of glass, ornamented glass boxes, ornamenting and cutting of simple and intricate designs on plate or sheet glass; also on ground and flashed glasses, rounding and polishing of edges, cutting of monograms and fancy letters, etc., etc.

GEORGE E. ANDROVETTE & CO.

show in their exhibit some portrait work of a high order of merit. Messrs. Androvette & Co. have for some years past devoted special attention to ecclesiastical work, and have brought this art to such perfection that their products are in demand in every part of the country. Their exhibit shows some recent designs in this line that are very creditable. In their treatment of opalescent glass they are particularly skillful. The peculiar brilliancy of that glass admits of the most pleasing treatment in the shading and blending of colors, to produce either floral, pictorial or landscape effects without the aid of painting. The art is thus seen to be practically limitless. It requires only the skill of the artist and the long study such as Messrs. Androvette & Co. have devoted to it to produce the best possible results.

OUR ILLUSTRATIONS.

Ceylon Building, World's Columbian Exposition, Chicago.
Washington State Building, World's Columbian Exposition.
The Chicago Academy of Sciences, Lincoln Park. Patton & Fisher, architects, Chicago.
Group, Agricultural Building, World's Columbian Exposition, Chicago. Philip Martiny, sculptor.
North Front Agricultural Building, MacMonnies' Fountain, World's Columbian Exposition, Chicago.
Cattle Group, Agricultural Building, World's Columbian Exposition, Chicago. Philip Martiny, sculptor.
Horse Group, East Entrance Machinery Hall, World's Columbian Exposition. M. A. Waagen, sculptor.
Texas State Building, World's Columbian Exposition, Chicago. Gordon & Laub, architects, San Antonio, Texas.
Group, Fire Controlled, Administration Building, World's Columbian Exposition, Chicago. Karl Bitter, sculptor.
Main Entrance Austrian Section, Manufactures and Liberal Arts Building, World's Columbian Exposition, Chicago.
Northwest View Agricultural Building, Group of Horses, MacMonnies' Fountain, World's Columbian Exposition, Chicago.
View Toward the South Screen, East View Electricity Building, West View Manufactures Building, World's Columbian Exposition, Chicago.
Detail of Bas-Relief Over Main Entrance, Transportation Building, World's Columbian Exposition, Chicago. John J. Boyle, sculptor.
Daniel Hudson Burnham, Director of Works, World's Columbian Exposition, Chicago. President American Institute of Architects.
View South Toward the Administration Building, West Front Electricity Building, East Front Mines Building, World's Columbian Exposition, Chicago.

PHOTOGRAVURE PLATES.

Published only with the Photogravure edition.

Sculpture on Building, by Carl Bitter.
Statue of Columbus, by A. St. Gaudens.
East Entrance to Administration Building, World's Columbian Exposition. Richard M. Hunt, architect.
North Entrance to Machinery Building, World's Columbian Exposition. Peabody & Stearns, architects.
South Entrance to Mines and Mining Building, World's Columbian Exposition. S. S. Beman, architect.
South Front of New York State Building, World's Columbian Exposition. McKim, Mead & White, architects.
Exhibition Building of Walter Baker & Co., World's Columbian Exposition. Carriere & Hastings, architects.
Hessian Town Hall, German Village, Midway Plaisance, World's Columbian Exposition. Karl Hoffaker, architect.
Upper Bavarian Farm House, German Village, Midway Plaisance, World's Columbian Exposition. Karl Hoffaker, architect.
Exhibition Building of the New York Central & Hudson River Railroad Company, World's Columbian Exposition. Bradford L. Gilbert, architect.
Upper Bavarian House, Midway Plaisance, World's Columbian Exposition. Karl Hoffaker, architect. This is a farmhouse, and not unlike the chalets of Switzerland, but is true to the German type, which still prevails, as it did hundreds of years ago, in the uplands of Bavaria. The first story is finished in white plaster. The entrance door is curiously paneled and not unlike the joinery to be found in oriental countries. The walls of the second story are covered with wide clapboards, and the gable with vertical boarding. The bracket beams supporting the balcony are carved, but the ends of roof beams are faced with frontal boards. The roof, which is nearly flat, is covered with shingles, and is weighted with heavy pieces of rock resting on small tree trunks, from which the bark has not been removed, to make the light structure secure against heavy winds that prevail in the mountain districts. These

houses are always built with the gable end to the road. The gable is surmounted with a cross, attesting the devotional character of the people of Catholic Bavaria.

The Walter Baker & Company's Pavilion, World's Columbian Exposition. Carriere & Hastings, architects. This is the only work of this firm on the Exposition grounds, aside from their contributions to the Art Gallery. It is a concessionary building to advance the interests of American chocolate and cocoa, and is located at the southeast corner of the Manufactures and Liberal Arts building. It is a very good illustration of the Louis XV Rococo of France, and resembles in its elaborate details the Pavillon des Pastillistes of the Paris Exposition of 1889. With the exception of the ground stairway, which is of oak, painted white, the whole of the exterior is modeled in stucco. This is the only building on the grounds in which all the stucco is made of New York plaster. The modeling was all done by Henri Sheltgen, of New York.

Hessian Town Hall, Midway Plaisance, World's Columbian Exposition. Karl Hoffaker, architect. Amid the rattle of tom-toms, the piercing notes of oriental pipes, and the howling of fakirs, there are a few exhibits in the Midway Plaisance which make no outside demonstrations, and within appeal to the esthetic no less than the gustatorial appetite. Of such is the German village, though even this has been misled by evil example to the display of unesthetic placards on its outer walls which will prevent us from illustrating by photogravure one of its quaintest and most interesting features, the entrance gateway, for a view of which our readers will have to consult the illustration on page 6 of the beautiful brochure by George Buss, published by Max Patch, of Berlin, and sold at the German village. The village on the Midway is intended as an illustration of German life of the present day in a setting of the sixteenth century. It is more than this, for inasmuch as it is architecturally and ethnologically an illustration of the arts and customs of many independent sovereignties, it is one of the manifestations of the national enthusiasm which has followed the formation of the German Empire under William I. Its originator and founder, now its director also, Dr. Ulrich Jahn, of Charlottenberg, has chosen the Columbian Exposition as the time and place for this unique exhibit. Dr. Jahn is a man of science and an enthusiast, a pupil of Virchow, who has already distinguished himself by some German mythological works, and by several collections of North German legends and fairy tales. Upon learning of the organization of the Exposition, with the assistance of the German Bank and the National Bank of Berlin, he organized the German Ethnographical Exhibition Company to carry out his ideas. The space procured was the best on the ground for the purpose, having many fine shade trees, and the ground being rolling in some parts. But the greatest success of the venture depended on the work of the young German architect and archaeologist, Karl Hoffaker, who was given full charge of the designing and decoration of the buildings. As Herr Hoffaker was also the architect of the German Government building on the main grounds he may be classed among those who have done the most extensive work in the Exposition. As Hoffaker is likely to become the leader of the modern school of German mediævalists, which has of late been growing up as a protest against the cold formalism of modern German architecture, some account of him may not be amiss.

He was born at Darustadt in 1856, and educated at the Polytechnic at Karlsruhe. The years he spent in the civil service of Baden, after having passed his government examination, were entirely devoted to the science of engineering, and it was not until a ripe age that he, following the bent of his inclinations, turned his attention toward art, industry and architecture. George Buss says of him: "Endowed with abundant imagination and a keen eye, possessing an enthusiastic admiration for the works of our old masters, and in his whole instincts inclining toward decorative painting, he has, since his settlement in Berlin in the year 1880, produced with untiring creative powers many acknowledgedly admirable works. As a teacher in the Art School and in the Industrial Art School, he has developed a stirring and fruitful activity. More than once he has proved his masterhand in the decoration of large rooms for art purposes, exhibitions and other festive occasions; has shown his distinguished ability in designs for industrial art utensils and ornaments, and has evidenced his subtle artistic perceptions in the successful execution of richly ornamented addresses and diplomas. The production that is now spread before us affords a new and brilliant proof of his talent. It is picturesquely conceived, genuinely German in feeling, and amply proves how deeply the artist has penetrated into the spirit of the decorative art of the middle ages and the early German Renaissance, and with what originality he has succeeded in reproducing the peculiar features of the old framework buildings, which always varied according to the nature of the country by which they were surrounded."

Such is the artist who, with all the enthusiasm that a love for the picturesque architecture of his own country in the olden time could instill, conceived the plan and executed the work, to its minutest detail, that we now find in the German village. Perhaps not one in a hundred of the host of American visitors who listen to the music, drink the wine and beer and consume the triumphs of culinary art which are dispensed on this enchanted spot, regard it as any other than a money-making show. The mass of Germans in this country are too poor to indulge in its luxuries, but they can see enough to be reminded of some things in the Fatherland that they could not bring with them save in memory, which has slowly faded but is here to be revived. But to the archaeologist, the architect and the artist here is a mine of lore and wealth such as never

before and never again will be seen in our land. To make this clear it should be understood at the outset that there is no structure in the German village (except parts of the castle which might have been built of stone) that is of an imitative character. The buildings are genuine structures of the same materials as were used in the periods and places they are intended to reproduce. The largest part of the material was prepared in Frankfurt-on-Maine, by the contractors, Holzmann & Co. Otherwise most of our words would be wasted.

The general plan of the village is a rectangle about 225 feet wide and 750 feet long. One long side fronts the main avenue, but all the buildings are only seen effectively from the interior of the ground. The west end, covering nearly one-half, is a concert garden containing two band stands and a large summer restaurant in the Baroque style. The castle, with surrounding wet ditch or moat crossed by two drawbridges, occupies the center of the ground. Part of this was shown in one of the small half-tone pictures in the August number. The castle, which will be described later on, is composed of three parts and has an open courtyard in the center. The other principal buildings are the Hessian town hall, a Black Forest cottage, a Westphalian farmhouse, an upper Bavarian farmhouse and a cottage from the Spree forest.

Our Photogravure gives one view of the Hessian town hall, which is next in importance to the castle. It is, as might be expected, the seat of government of the village, that is to say, the offices of the company are on the second story, approached by the covered exterior stairway, but the ground floor and burghers' hall are used as a bazaar. No distinctive specimens of shop architecture were erected in the village, as the whole was intended to represent the rural home life that surrounds the stronghold of one of the knights of Langenau. But recently, to increase the revenues, many open stands have been erected, giving it the appearance of market day in the village. This town hall is of the style found in the small cities of Upper Hesse. It bears the date 1585. It is built of solid timber, the first story being filled in with brick and plastered with cement flush with the framing on the exterior. The offsets around the second story are covered with slate, as also the roof, spire and dormers, while the main wall of the second story is partly filled in with wood and partly with brick and cement like the first story. The roof on the west side is carried down to the second story floor. The council hall of the burghers is at the south end and is carried up through the second story where it is surrounded by a gallery. The timber construction is shown throughout on the inside, and all the wood is skillfully stained to give the exact appearance of age. The most noticeable feature is the slating of the roof. Very small lozenge-shaped slates, all of which were imported, are used throughout, and the workmanship is calculated to strike our home slaters with wonder. There is not a valley angle anywhere, and all flashing is dispensed with, the roof being carried up in curves so as to die off against the sides of the little dormers and wherever they come in contact with vertical walls. Many of the slates used are not more than 3 by 6 inches in size. Such a roof must be perfectly tight against driving rain or snow. The outside staircase with covered porch at the top is a beautiful piece of design and construction. The steps are of solid timber. The roof framing throughout is noticeable as a correct specimen of the framing of the period selected and is studied from actual examples. As this system of building is still in use in the mountain districts of Hesse, whenever new erections are called for (which is seldom, for the buildings of several centuries ago are still in good preservation), there is no doubt that it correctly shows that which prevailed in very remote antiquity.

MOSAICS.

ARCHITECTURAL FAIENCE.—The term Faience (procellano di Faenza), designates a refined quality of pottery, often painted, and covered with a thin glaze, which was invented and is largely produced in the important city of Faenza, Central Italy. There are several species of French faience, and the celebrated Wedgwood ware of England is a British faience. An American faience is now added to the list. It is produced by the Boston Faience Works, of Fisk, Homes & Co. and Atwood & Grueby, who have offices also in New York and in Philadelphia, as may be learned from their announcement in the advertising pages of THE INLAND ARCHITECT, and will soon have an office in Chicago. They issue a handsome catalogue 10½ by 14 with phototype illustrations of architectural faience, constructive and ornamental, for exterior and interior work, in original glazes and enamels. The catalogue has eight large plates containing illustrations of six faience mantels, and of the unique depositors' desk in the Five Cents Savings Bank, Worcester, Massachusetts. Two plates are devoted to the relief panel decorations in the waiting room of the new terminal station of the Philadelphia & Reading Railroad, at Philadelphia, and another plate offers suggestion for an entrance hall in faience. An excellent feature of the mantel illustrations is that their dimensions are given. Among the recommendations of faience are the durability and permanence of the material, the beauty of its glazes and enamels, and the cheapness of details modeled in plastic material as compared with hand-carving. The illustrations in this catalogue show great delicacy and grace of modeling and beauty of combination. A sample of their work may be seen in the sub-ways of the new Illinois Central Depot, which have been decorated with this American faience. They have also decorated the corridors of the Adams House on Washington street, Boston, and of the Charlesgate, on Beacon street, in the same city. In Springfield, Massachusetts, the exterior of the Chapin National Bank.

BUILDING OUTLOOK.

OFFICE OF THE INLAND ARCHITECT,
CHICAGO, September 15, 1893.

Adverse conditions prevail in almost all branches of industry and business. The unexpected scarcity of money has resulted in the tying up of funds that would otherwise be invested, and has frightened away more capital than any similar depression has done within memory. Builders had a prosperous half-year, and anticipations were indulged in that the last half of the year would witness the usual expansion in all building operations. The collapse is only temporary. The fundamental conditions of the country are sound. Existing conditions are only an accident. Capital is only temporarily hidden. Enterprise is only frightened, not beaten. The business men of the country pay but little attention to financial management, outside of their own individual and personal affairs. The present financial depression has taken all by surprise. It must be and will be remedied, and that under the pressure of public opinion, quickly. When remedied, there will be no occasion for further delay. Prices and values, under these conditions, have naturally and necessarily fallen to a very low point. Production has been properly curtailed. Stocks of material and merchandise have dwindled. Contractors, builders, engineers, architects and all others engaged in building operations have been obliged to move more slowly, and await a readjustment of financial conditions. That a restoration of confidence and of natural, healthy conditions is near at hand is evident. In one respect the depression has accomplished some good, and that is in forcing the country at large to slow up, to look around, take bearings and to effect a partial liquidation. The tendency of our American life is to rush into extremes, to pile up too fast, to take too much for granted. The lesson of the past two or three months is not lost. A few thousand traders have gone under. Every man in business has felt his right to be in business tested. With regard to the future, prophecies are out of place, and are not needed. The requirements of this country are enormous. Nothing can check healthy expansion. The industries are all in a healthy condition. That demand will again set in on a large scale is clearly evident. Although the aggregate indebtedness of the country is enormous, it amounts simply to borrowed capital which is invested in profitable reproductive enterprises. We may therefore look forward to a gradual improvement in building, in manufacturing, in railroad construction, and in agriculture, as times and seasons permit, after the settlement of existing financial questions. It is not probable that the volume of business will swell to its usual proportions this fall, but we can rest assured that something of more importance will be done, namely, the laying of the foundations for greater industrial and commercial activity next spring.

SYNOPSIS OF BUILDING NEWS.

Architects are invited to furnish for publication in this department monthly or occasional reports of their new work before the letting of contracts. Reports of buildings costing less than \$5,000 are not published.

Buffalo, N. Y.—Architect W. H. Archer, Buffalo, New York, has prepared plans for three modern frame houses, consisting of eight rooms, attic and basement, on Gorton street, city, for Mr. Louis Roesch; stone basement, shingle roof, plate glass, etc.; the interior to be finished in natural woods; bathroom and fixtures, sanitary plumbing, electric bells, furnace, gas, hardware and painting. Also, a stone and frame apartment house for Mr. Charles Boehme, on Hampshire street, city, containing four suites of apartments, consisting of parlor, dining room, kitchen, three chambers, bathroom and fixtures, closets and dressers; also separate cellar for each apartment, containing furnace, laundry and tubs, etc.; shingle roof, sheet metal work; galvanized iron conductors, ventilators, skylights, light shaft, etc.; interior finished in natural woods; oak entrance doors with bevel plate glass, bronze hardware; also, fitted with electric bells, speaking tubes, gas, window screens, sanitary plumbing and all modern improvements; hot-air heating, leaded and clear glass, painting, decorating, sewerage, etc.; Johnson & Sage, city contractors. Also, a frame and stone Colonial residence for Arthur Spillman, Tonawanda, New York; two and one-half stories, veranda, gabled roof, stone basement, cement floor, laundry, toilet room in basement; interior finished in natural woods, with mantels, hardwood floors, carved newels, plate and stained glass, hot-water heating, electric bells, speaking tubes, blinds, electric and gas chandeliers, bathtub and water closet, refrigerators, boiler, hygienic plumbing and ventilation, antique bronze hardware, decorating and all modern improvements; cost \$4,500. Also a stone and frame residence for A. Harrison, Tonawanda, New York; cut stone basement with cement floor, laundry, etc.; shingle roof to house, conical and turreted at corners and circular bay to dining room; sheet metal work, conductors, etc.; veranda, oak entrance doors, oak stairs, carved newels, plate, stained and leaded glass, electric bells and speaking tubes, chandeliers, bath tub, butler's and kitchen sinks, laundry tubs, water closets, wash basins, boiler, hygienic plumbing and all modern improvements. Also, design for the new altar, choir stalls, sedilia, etc., for St. Mark's Episcopal Church, Tonawanda, New York; is of Gothic work and is made of red oak; the altar table proper is divided into three recessed panels with carved corbel moldings of exquisitely fine design at the top, and contains within circular bead molds the symbolic A and O with the three interlaced circles of the Trinity in the center; each panel is separated by a semi-circular Gothic column with a carved foliated capital in bold relief, and with a graceful carved base; the whole standing on a projecting plinth and above projecting mold of altar proper; the retable has four small columns with base and capital and an intervening space has the words "Holy, Holy, Holy" in each panel; the altar will stand on three steps and is a fine sample of Gothic design workmanship; the choir stalls, of red oak, as well as the clergy seats, have rounded and chamfered ends, book rest and depository; the frontals are composed of "fleur-de-lis" ends, with open spindle fronts and circumflexed arches; small carved crosses enrich the whole; the seats are commodious and convenient and elegant in design; the altar rail matches the frontals. Also, plans for the new Queen City Radiator Works, to cost \$65,000; a large and substantial structure of brick and stone, 327 feet long and 110 feet wide, with open courts and yards, and a railroad switch from the Central Railroad running through the building; the façades present a fine architectural appearance, Romanesque in style, with a handsome octagon office and pavilion surmounted by a flagstaff and enriched with ornamented brickwork courses, arched office entry and windows; the office building will be divided into four offices and roofed promenade on third floor, with complete electrical control and communication with every department, including steam engine and water and fire indicators, and finished in first-class style.

Chicago, Ill.—Architects Huehl & Schmid: For James H. Hansen, on the southwest corner of Oakdale avenue and Evanston avenue, a four-story and basement apartment house, 49 by 125 feet in size; to have two fronts of dressed cut stone up to sill of second story, and above this will be of Roman pressed brick trimmed with terra cotta; the interior will be handsomely finished in brick, marble vestibules, tile floors, hardwood mantels, the finest of sanitary improvements, electric light, heating, etc.

Architect A. G. Ferree: For S. D. Waldeu, at Sixty-fifth and Wentworth avenue, a block of seven stores, 125 feet front by 60 deep; to be of brick, stone,

iron and plate glass, and galvanized iron cornice. For John Schram, at Wright street near Sixty-fifth court, a three-story flat building, 44 by 60 feet in size; to have a front of pressed brick and stone; will put in cement floor, bathrooms, closets, mantels, laundry tubs, etc. For George J. Shannon, at Evanston avenue near Seventy-first street, a three-story flat building, 44 by 60 feet in size; to have a front of pressed brick with stone trimmings; all the sanitary improvements will be put in, hardwood finish and mantels, bells, speaking tubes, laundry tubs and heating. For John W. Schram, at Wright street near Sixty-fifth, a three-story and basement flat building, 44 feet frontage and 60 feet deep; to be of pressed brick and stone front, have bathrooms, closets, mantels, laundry tubs, electric bells, speaking tubes, furnaces, etc.

Architect George Beaumont: For B. Harris, at 159 West Taylor street, a three-story and basement store and flat building, 24 by 60 feet in size; to be of pressed brick and stone front, have the sanitary and modern improvements. For Mrs. Mary O'Connell, at 3635 Vernon avenue, a two-story and basement flat building, 23 by 72 feet in size; to have a Bedford stone front, hardwood finish, mantels, all the sanitary appliances, heating, etc.

Architect Thomas Wing: For Frederick J. Lange, at 1744 Deming court, a two-story, cellar and attic residence, 31 by 60 feet in size; to have a handsome stone front, hardwood interior finish, the plumbing specialties, heating, etc. Also, two-story barn.

Architects Hotchkin & Marston: For J. K. Farley, at Edgewater, a two-story basement and attic residence, 30 by 40 feet in size; to be of frame construction, have stone basement, hardwood interior finish and mantels, all the sanitary improvements, electric light, hot-water heating, etc.

Architects Ostling Brothers: For J. P. Sommer, at Graceland avenue near Southport avenue, a three-story and basement store and flat building, 50 feet front by 60 deep; to be of pressed brick and stone front, have cypress finish for the interior, all the sanitary improvements, mantels, etc. For S. Johnson, a two-story and basement frame flat building, 22 by 50 feet in size; to be built at Seminary avenue near Cornelia street; will put in bathrooms, closets, mantels, etc.

Architect D. A. Lapointe: For George Casselle, a two-story flat building, 22 by 55 feet in size; to have a stone front; the interior will be finished in pine, have the best of sanitary improvements, mantels, electric bells, speaking tubes, laundry tubs, etc. For P. Fahrney, at Warren avenue, a two-story addition, 27 by 30 feet in size; to be of marble with copper trimmings; the interior will be very elaborately finished up in marble, mosaic and tile; all the latest improvements in electric light, ventilation, etc., and also in plumbing, will be put in. For James Griffin, at Harvard street near Kedzie avenue, a two-story and basement flat building, 22 by 53 feet in size; to be of pressed brick and stone front, have all the sanitary improvements, laundry tubs, mantels, etc.

Architect Frederick Foehringer: For Henry Stolley, at 899 Clybourne avenue, a four-story store and flat building, 25 by 72 feet in size; to be of pressed brick and stone front, have bathrooms, closets, mantels and gas fixtures.

Architect W. L. Klewer: For Charles Taube, a two-story frame residence, 23 by 65 feet in size, to be erected at Perry street near Sulzer street, Ravenswood; will put in stone basement, bathroom, closets, mantels, electric bells, laundry tubs, furnace, etc.

Architects Kleinpell & Borst: For J. C. Childs, at southeast corner of Desplaines and Monroe streets, a two-story and basement store and flat building, 20 by 52 feet in size; to have a front of pressed brick with stone trimmings, the sanitary plumbing, mantels, etc. For Thomas Quayle, a two-story, basement and attic residence, 37 by 57 feet in size; to be of frame construction, have brick basement, hardwood interior finish and mantels, the best of modern plumbing, laundry tubs, heating, etc.

Architects Randak & Rizmy: For Frank Posar, a four-story and basement flat building, 22 by 80 feet in size, to be erected at Wood street between Twelfth and Taylor streets; it will have a pressed brick and cut stone front, hardwood finish and mantels, bathrooms, closets, etc. Also made plans for a two-story and basement flat building; to have a front of pressed brick with stone trimmings, hardwood finish, mantels, bathrooms, closets, etc.; to be erected on Fillmore street. For F. Pokoruey, a three-story and basement flat building, 25 by 110 feet in size, to be erected on Ogden avenue near Robey street; the first story will be of stone and above of pressed brick and stone; the interior will be finished in hardwood, have mantels, bathrooms, closets and steam heating.

Architect John T. Hetherington: For L. Karcher, on North avenue and Weston street, a three-story store and flat building, 24 by 80 feet in size; to have a pressed brick and stone front, bathrooms, closets, mantels.

Architects Dixon & Brooks: For George Sunderland, on Forest avenue near Thirty-eighth street, three three-story residences, 50 by 80 feet in size; to have handsome stone fronts, hardwood interior finish and mantels, the best of modern improvements, heating, etc. For M. Morrison, on Belden avenue, a two-story basement and attic residence, 24 by 60 feet in size; to have a stone front, slate mansard, the best of sanitary and modern conveniences, heating, electric light, etc.

Architect George Grussing: Finishing plans for a block of five three-story apartment buildings, 77 by 75 feet in size; to be erected on the corner of Adams and Spaulding streets; to have a handsome front of buff Bedford stone, hardwood finish and mantels, the best of modern sanitary improvements, laundry tubs, gas ranges and fireplaces, gas and electric fixtures, marble and tile work, heating, etc.

Architect D. A. Blythe: For J. C. McGraw, corner of Fifty-seventh and Winter streets, a two-story flat building, 50 by 150 feet in size; to be of pressed brick and stone, have interior finished in hardwoods and mantels, all the sanitary arrangements, gas and electric light fixtures, etc.; it will contain eleven suites of apartments and one store.

Architect Julius Speyer: For E. Kaufmann, on Burling street near Fullerton avenue, a two-story and attic residence; size 24 by 62 feet; to be of stone front, have hardwood mantels and interior finish, hot-water heating, the best of sanitary improvements, laundry tubs, electric light, etc. Also, completed drawings for the Kneippe Sanitarium, to be erected at Woodstock; it will be a three-story building of frame construction, with stone basement; interior to be finished in hardwoods and have all the sanitary and modern improvements, electric light, etc.

Architects I. K. & A. B. Poud: For Charles W. Kirk, a three-story and basement residence, to be erected at Highland Park; to be veneered with pressed brick, have hardwood interior finish, mantels, steam heating, electric light, etc.

Architect R. T. Newberry: For the Wakefield Rattan Company, a four-story factory, 50 by 250 feet in size; to be constructed of common brick and stone, and have gravel roof. Also, a wing, 150 by 75 feet in size. For M. K. Howe, at Thirty-sixth and State, a block of four stores, 60 by 50 feet in size; to be of brick, iron and plate glass.

Architect F. B. Townsend: For Mrs. Ellen C. Adams, at Buena Park, a two-story basement and attic residence; to be of Anderson pressed brick and stone front, have all the improvements, hardwood interior finish and mantels, gas and electric fixtures, laundry tubs, furnace, etc. E. M. Bent has the whole contract.

Architect J. E. O. Pridmore: For Marine & Underwood, a three-story and basement store and flat building, 100 by 100 feet in size; to have a front of pressed brick and stone, hardwood interior finish and mantels, bathrooms, closets, laundry tubs, bells and speaking tubes, etc.; to be erected on Madison street near Ashland avenue.

Architect E. H. Throck: For Charles Cropp, a two-story frame residence, 29 by 39 feet in size; to have a stone basement, all the sanitary improvements, hardwood finish and mantels, heating, laundry tubs, bells and speaking tubes. Also for B. F. Sweet, at Western Springs, a two-story basement and attic frame residence, 45 by 36 feet in size; to have a stone basement, hardwood interior finish and mantels, furnace heating, electric and gas fixtures, etc.

Architects Kley & Lang: For A. Sass, on School street, a two-story frame flat building, 22 by 52 feet in size; to have all the sanitary improvements, furnaces, etc. For H. Cramp, on Robey street, a four-story and basement flat building, size 27 by 105 feet; to have a handsome stone front, hardwood interior finish and mantels, bathrooms, closets, laundry tubs, gas fixtures, furnaces, bells and speaking tubes. For M. Gurge, on Fowler street, a two-story flat building, 25 by 54 feet in size; to have a front of St. Louis pressed brick, with Connecticut brownstone trimmings, hardwood interior finish and

mantels, bathrooms, closets, laundry tubs, bells and speaking tubes. For Frederick Hoffman, on Center avenue, a three-story and basement store and flat building, 25 by 93 feet in size; to have a front of St. Louis pressed brick, with buff Bedford stone trimmings, hardwood mantels, hardwood interior finish, bathrooms, closets, laundry tubs, plate and stained glass bells and speaking tubes. Also, for same owner, will raise up two-story building and add one story underneath; to be of St. Louis pressed brick and Bedford stone; will put in hardwood finish, mantels, bathrooms, closets, etc.

Architect Joseph P. Hettinger: For W. Morgan, at Garfield avenue and Sedgwick street, a four-story and basement apartment house, 49 feet frontage; to be of St. Louis pressed brick and Bedford stone front, have hardwood interior finish, and mantels, electric bells, speaking tubes, the best of sanitary plumbing, steam heating, electric light, etc.; cost \$20,000.

Architect H. T. Park: For G. W. Cole, at Stewart avenue and Sixty-eighth street, a two-story and basement residence, 25 by 70 feet in size; to have a stone front, oak interior finish, hardwood mantels, the best of nickel-plated sanitary plumbing, electric light, furnace, etc. For Michael Duffey, at Forty-first and Wilcox streets, a two-story flat building, to have hardwood interior finish and mantels, bathrooms, closets, etc. For Mrs. Lowrey, at Wilmette, a two-story frame residence; 30 by 50 feet in size; to have a stone basement, hardwood finish and mantels, bathrooms, closets, mantels, furnace, gas fixtures, laundry tubs, bells, tubes, etc.

Architect Theodore Lewandowski: For A. Dickmeyer, making plans for a two-story and basement residence, 21 by 53 feet in size; to be constructed of St. Louis pressed brick and stone with galvanized iron cornice, have hardwood interior finish and mantels, bathrooms, closets, gas fixtures, laundry tubs, electric bells and speaking tubes; to be erected on Rockwell street near Potomac avenue. For Herman Pietsch, on Burling street, a two-story flat building; to be of pressed brick and stone front; have hardwood interior finish and mantels, bathrooms, closets, laundry tubs, bells, speaking tubes, steam heating, etc.

Architect Charles H. McAfee: For John F. McEury, at 382 W. Polk street, a four-story and basement flat building; to have a front of pressed brick and stone and all improvements.

Architect Louis Martens: For Fred Linserbarth, on Clark street, a four-story store and flat building, 30 by 85 feet in size; to have a handsome front of pressed brick and stone, hardwood interior finish and mantels, bathrooms, closets, laundry tubs, electric bells and speaking tubes, steam heating and electric light. For J. V. Scott, on Ashland boulevard, a three-story flat building, 28 by 75 feet in size; to have a front of blue Bedford stone, hardwood interior finish, all the sanitary improvements, steam heating, electric light, etc.

Architects Fry & Cunningham: For S. S. Parkes, a four-story flat building; 25 by 70 feet in size; to have a front of blue Bedford stone and cream colored Roman pressed and ornamental brick; to be of Gothic design, and have hardwood interior finish, mantels, steam heating, electric light, etc. For H. Lindemann, on Prairie avenue, four three-story flats; to be of stone and pressed brick front, have brick, red oak and Georgia pine interior finish, the best of modern plumbing, steam heating, etc. For F. Mulholland, a two-story flat building, 35 by 70 feet in size; to have a front of pressed brick and stone; hardwood interior finish and mantels, bathrooms, closets, laundry tubs, electric wiring, speaking tubes, furnaces or steam heating, etc.

Architect L. G. Hallberg: Making plans for four frame houses, to be built at Hollywood; to have stone basements, sanitary plumbing, etc. Also completed drawings for a two-story store and hall building, to be erected at the same place.

Architect W. J. Van Keurer has completed drawings for a handsome two-story, basement and attic residence; to be erected at River Forest; it will be 36 by 52 feet in size, of frame construction, with stone basement, have interior finish in cypress, hardwood mantels, the best of sanitary plumbing, hot-water heating, electric light, bells, speaking tubes, laundry tubs, etc.

Detroit, Mich.—Architects Donaldson & Meier are preparing plans of a very large frame residence, to be built at Orchard Lake, for David Ward, Esq.; to cost \$20,000.

Architects Malcombson & Huggiubotham have prepared plans for an addition to the Washington public school, on Beaubien streets, between Madison and Adams avenues; to cost \$10,000. Also plans for an addition to the police station, on Fremont street near Woodward avenue; to cost \$5,000. Also plans for an addition to the police station on Elmwood avenue near Champlain street; to cost \$5,000.

Architects Maycock & Newman, of Windsor, Ontario, are preparing plans of a three-story brick building, to be occupied by the Young Men's Christian Association in the upper stories, and the lower floors to be used for business, on the corner of Pitt and Ferry streets, Windsor, Ontario.

Architect John Scott & Co. have prepared plans of a three-story stone and pressed brick residence, to be built on the south side of Jefferson avenue between Rivard and Russel streets, for Mrs. Sarah E. Lovett; to cost \$30,000. Also plans for a three-story brick Fire Alarm building, on Larued street east, for the fire commissioners; to cost \$18,000.

Architect W. B. Stratton has prepared plans of a brick chapel on the southeast corner Warren and Trumbull avenue, for the Congregational Union; to cost \$10,000.

Architect Edward C. Van Leyen has prepared plans of additions and alterations of the residence of Captain Priddle, on Main street, Marine City, Michigan; to cost \$7,000.

Architects A. C. Varney & Co. are preparing plans of a two-story brick residence at Pontiac, Michigan, for Robert J. Lounsberry; to cost \$5,000. Also plans of a two-story brick school building for the school board at Pontiac, Michigan; to contain eight rooms.

Architects E. A. Walshe & Son are preparing plans of two two-story frame residences, to be built on the southeast corner of Dalzelle and Fourteenth streets, for Rev. James G. Doherty. Also plans of a two and one-half story brick residence, at Grosse Point, Michigan, for John Phillips; to cost \$7,000.

Louisville, Ky.—Architects Maury & Dodd report the following: A store building for Mrs. Edith Wilder, location Main between Fifth and Sixth streets; four stories and basement; to cost \$50,000; to be mill construction with entire front of terra cotta, and have composition roof; size 50 by 210 feet. Residence for Harry McGoodwin, location Third avenue near Hill street; to cost \$8,500; three stories and basement; to be of brick and stone, metal roof and have all modern electric work. Residence for Adolph Rosenthal, to cost \$7,500; location, Third avenue near Oak street, to be three stories, of brick, stone and terra cotta, with metal roof. Church, at Greenville, Kentucky, Presbyterian; to cost \$5,000; to be of brick and stone, slate roof; size 50 by 60 feet. Block of residences for Presbyterian Orphans' Home; to cost \$15,000; brick and stone, with metal and slate roofs; two stories high, five dwellings in all. Alterations and additions to Mr. Moore's residence, to cost \$5,000, including remodeling of plumbing work; location, Fourth avenue and Breckinridge street.

Pittsburgh, Pa.—New building projects are now almost at a standstill, but it is expected that next year will be an active season.

The churches of the Sacred Heart and St. Mary's are having plans prepared for a new Roman Catholic church on Atlantic and Penn avenues; estimated cost, \$100,000.

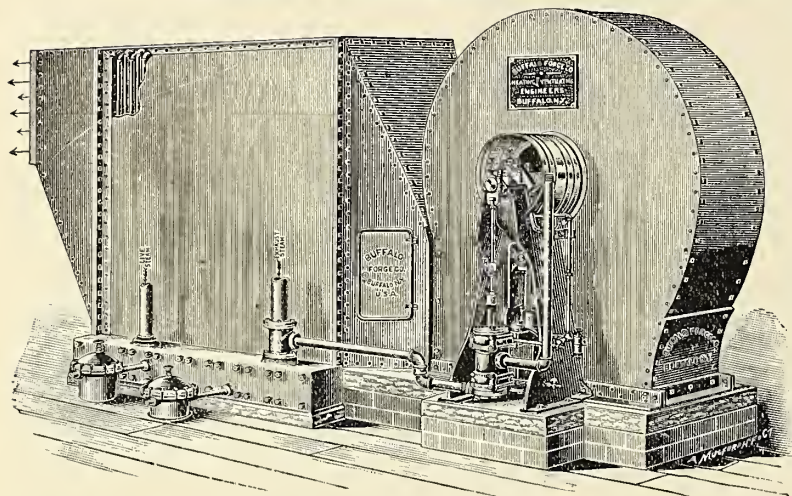
Architects Longfellow, Alden & Harlow: For W. C. Stewart, three three-story residences, Colonial style, on Irwin avenue, brick and stone, and latest improvements; to cost \$30,000.

Rochester, N. Y.—Architects Gordon, Bragdon & Orchard have prepared plans for a station for the Buffalo, Rochester and Pittsburgh Railroad at Bradford, Pennsylvania; to be built of brick with long meadow stone trimmings; cost \$12,000.

Architect J. Foster Warner has the following buildings under way: House on Goodman street, near University avenue, for Mr. T. O. Hamlin; cost \$10,000; finished in hardwood. House for Mr. Thomas Hawks, on Buckingham street, near East avenue; cost \$8,500. Twelve-story office building for Messrs. Sibley, Lindsay and Curr, on Main, St. Paul and Division streets; material of the first four stories granite, rest Perth Amboy buff brick, marble and Perth Amboy buff brick; terra cotta cornice; fireproof steel construction; all halls finished in marble, offices in hardwood; cost of building, \$600,000. Alteration and addition to carriage factory for Messrs. Cunningham & Son.

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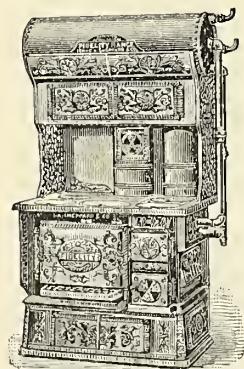
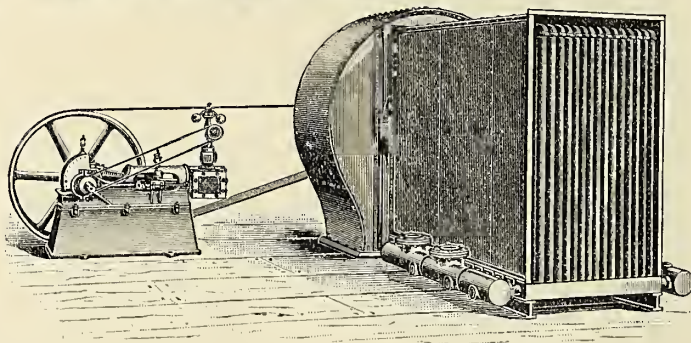
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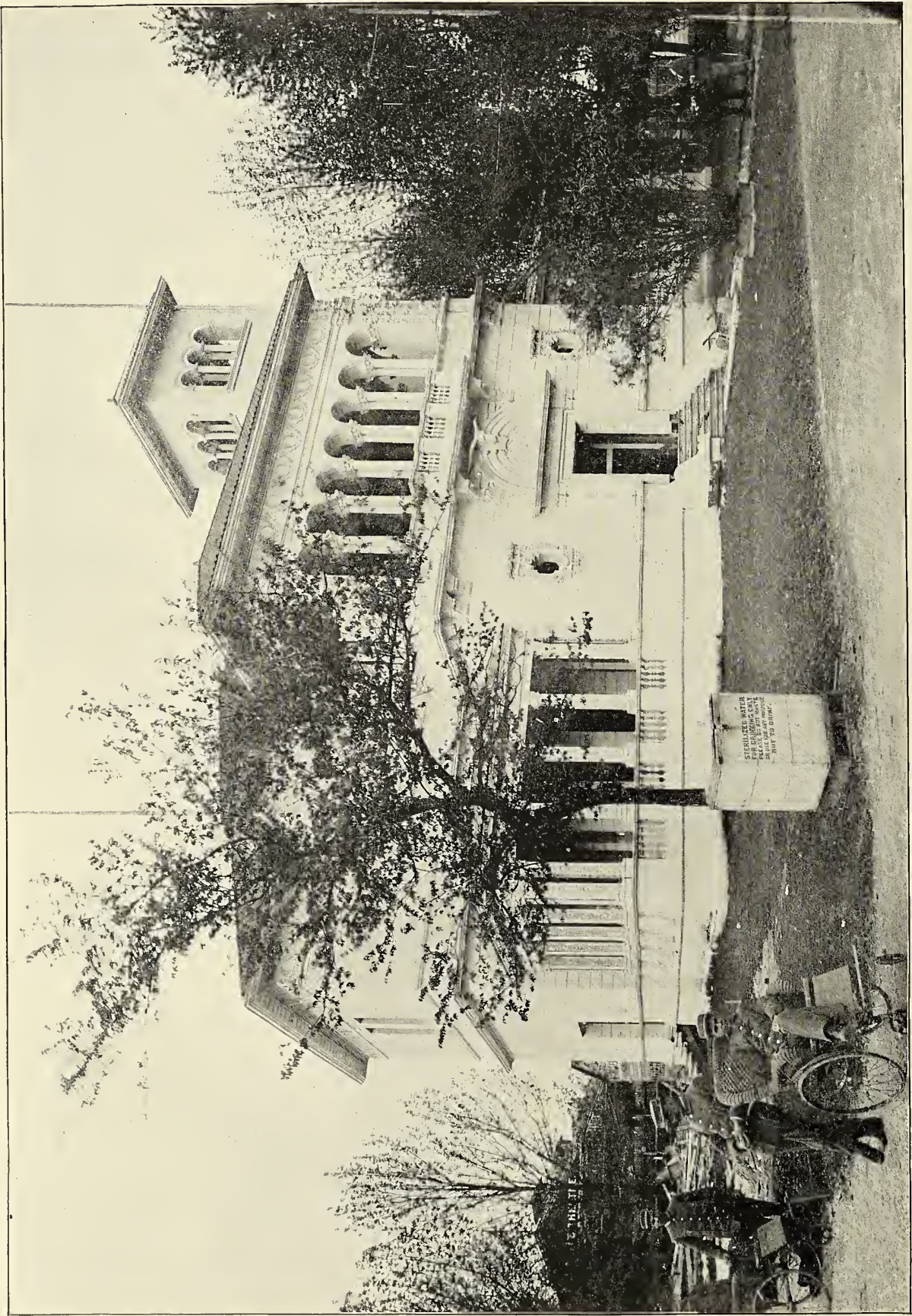


EAST ENTRANCE TO ADMINISTRATION BUILDING, WORLD'S COLUMBIAN EXPOSITION, CHICAGO.

RICHARD M. HUNT, ARCHITECT, NEW YORK.

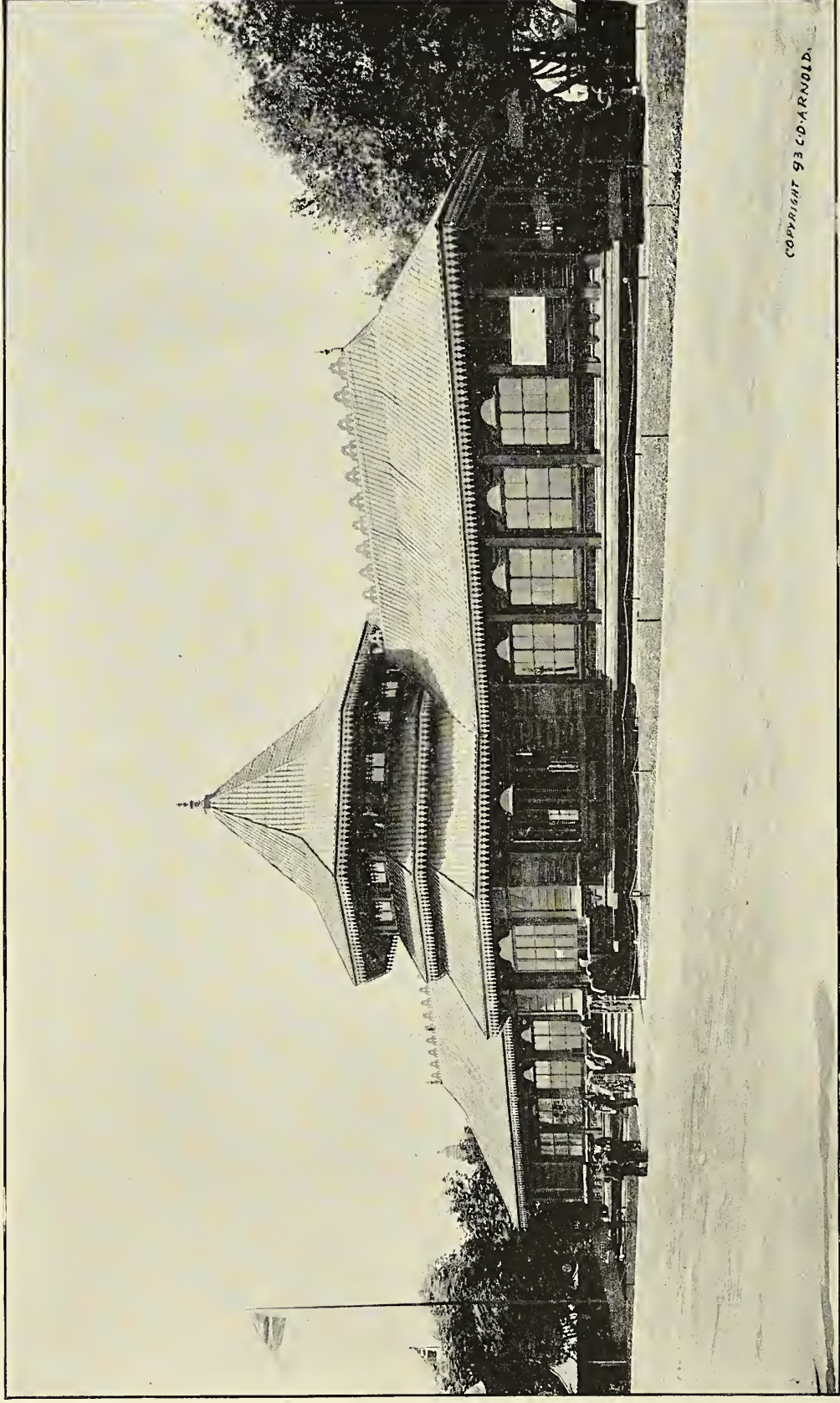
Sculpture on building by CARL BITTER.

Statue of Columbus by A. ST. GAUDENS.

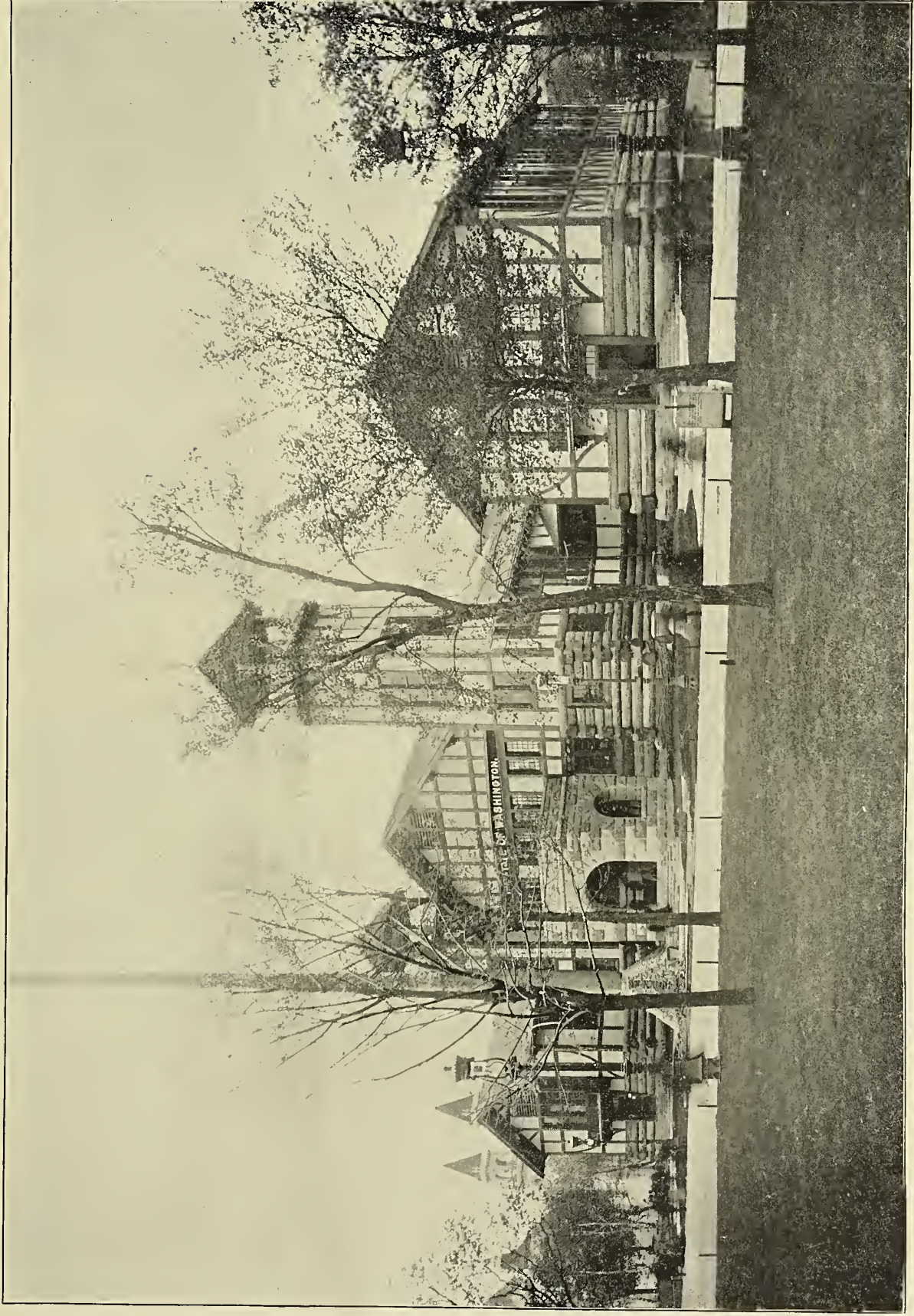


TEXAS STATE BUILDING, WORLD'S COLUMBIAN EXPOSITION, CHICAGO.

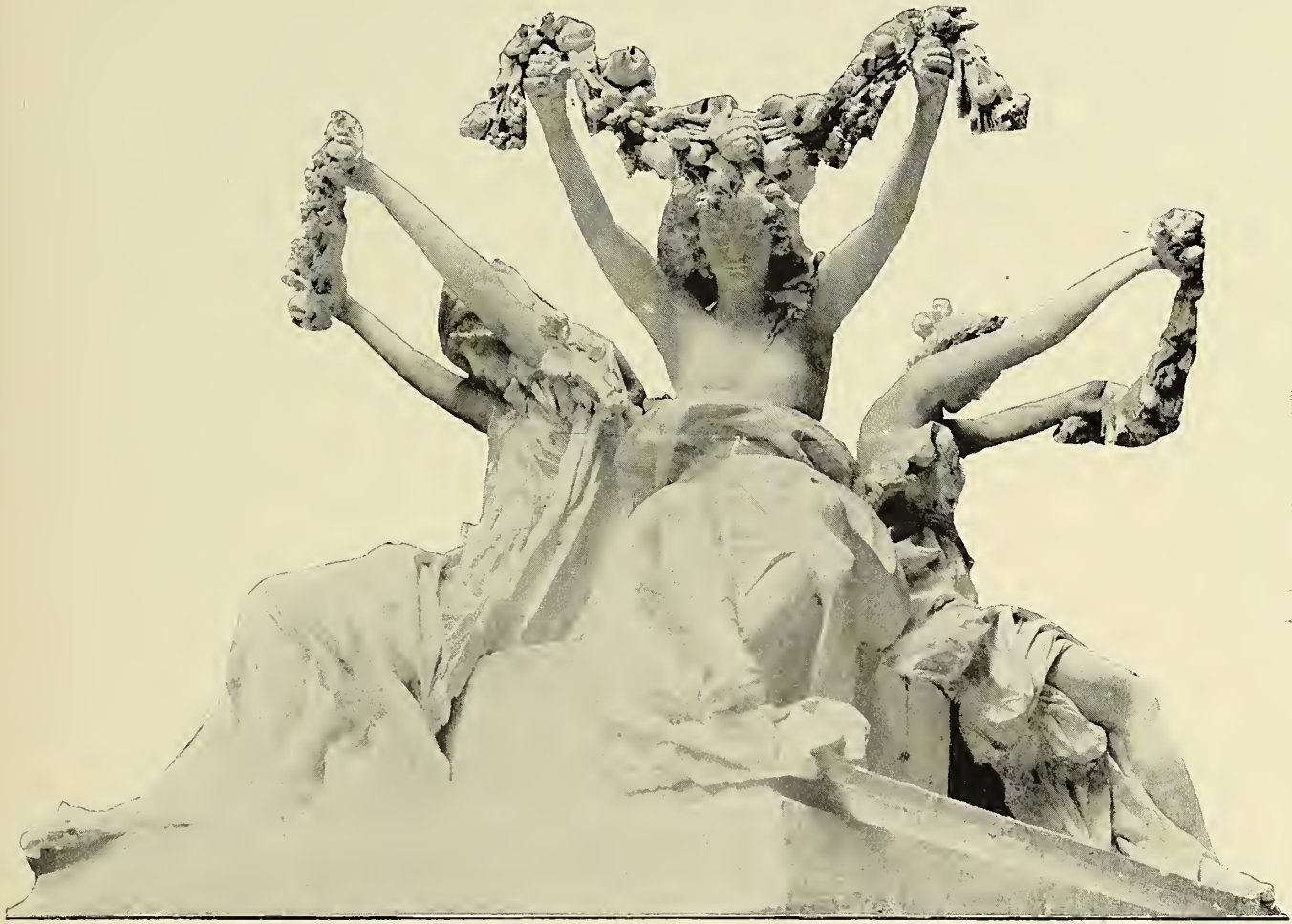
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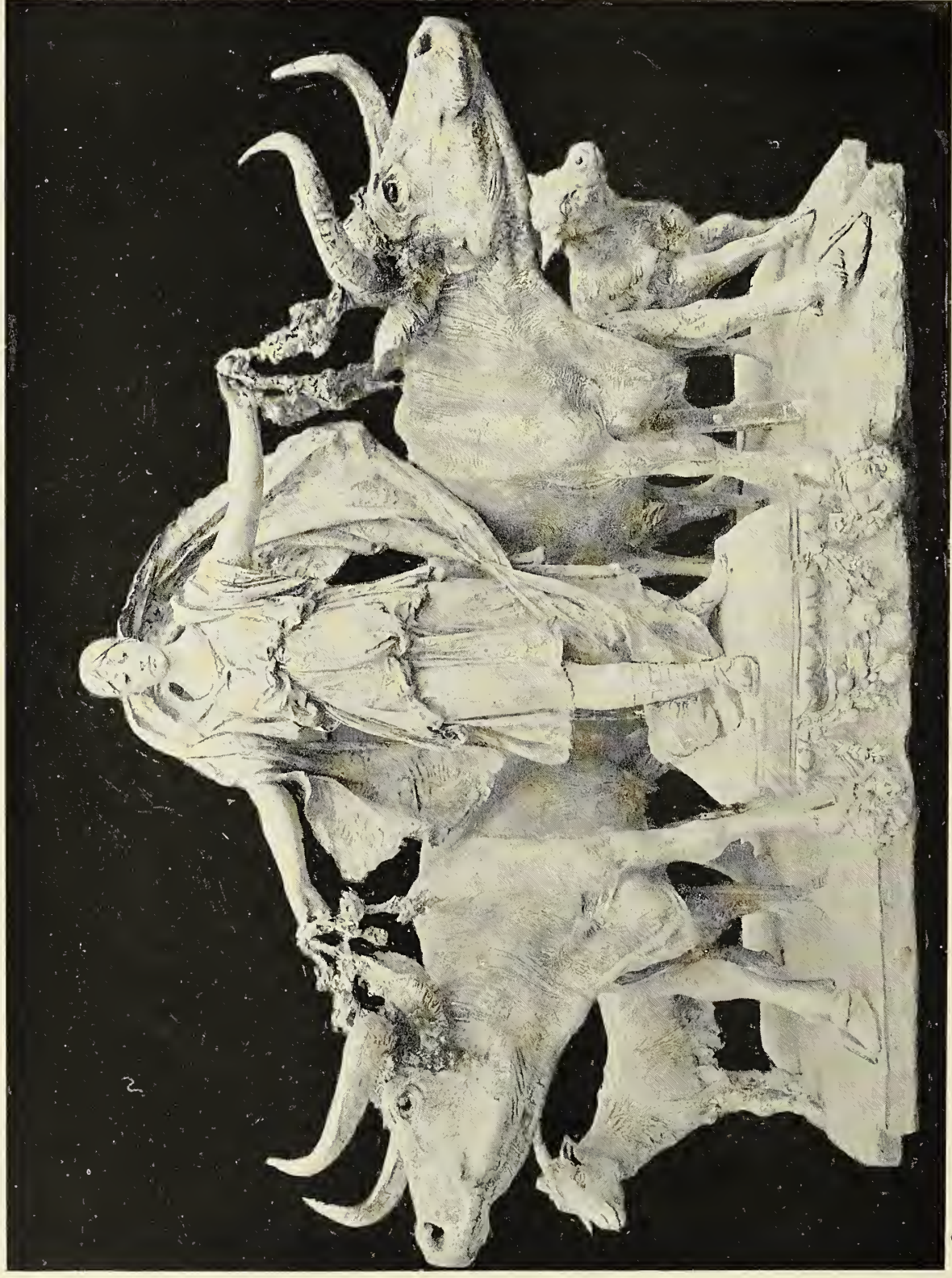
WASHINGTON STATE BUILDING, WORLD'S COLUMBIAN EXPOSITION, CHICAGO.



GROUP, AGRICULTURAL BUILDING, WORLD'S COLUMBIAN EXPOSITION, CHICAGO.
PHILIP MARTINY, SCULPTOR.

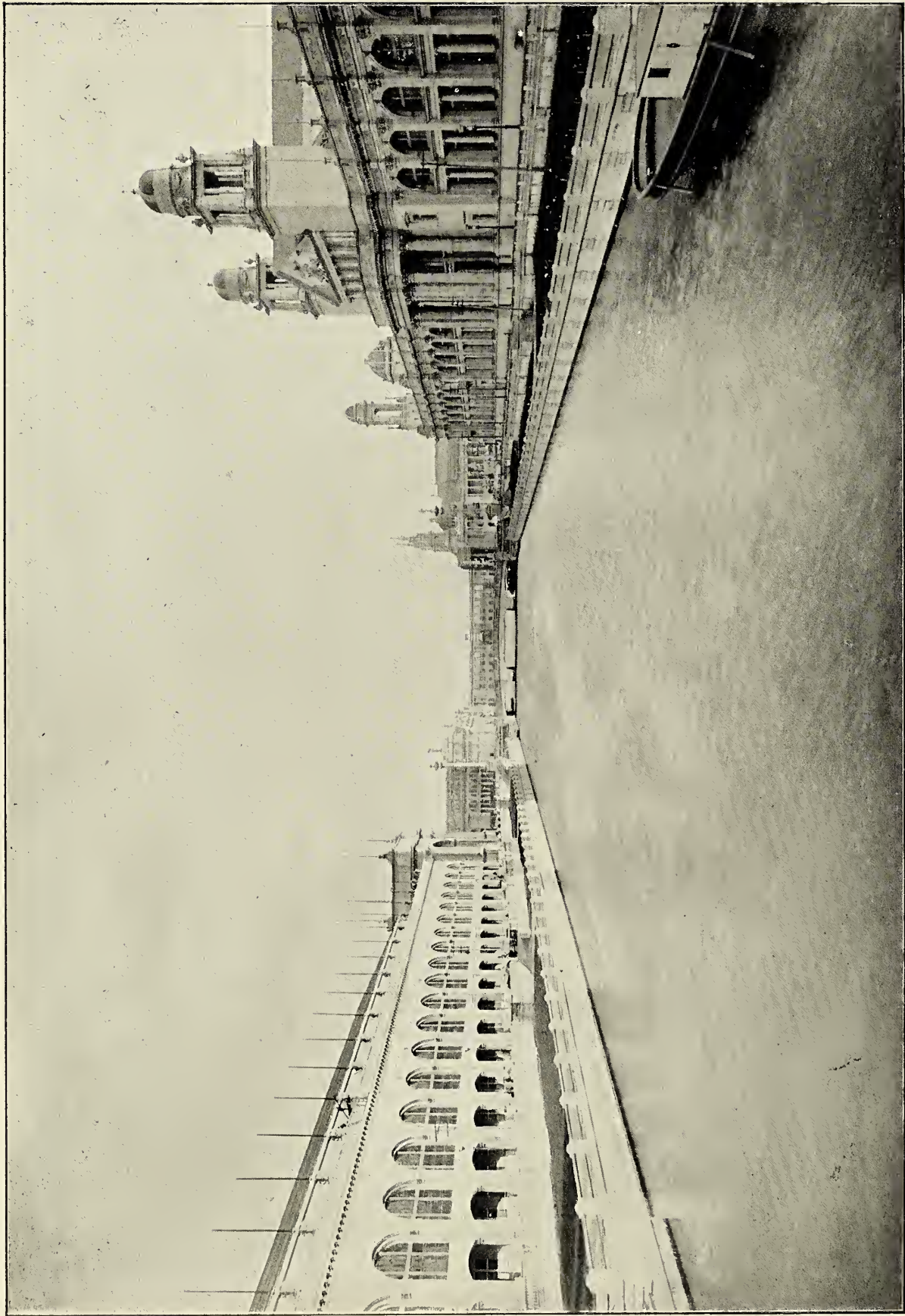


DETAIL OF BAS RELIEF OVER MAIN ENTRANCE, TRANSPORTATION BUILDING,
WORLD'S COLUMBIAN EXPOSITION, CHICAGO.
JOHN J. BOYLE, SCULPTOR.



CATTLE GROUP, AGRICULTURAL BUILDING, WORLD'S COLUMBIAN EXPOSITION, CHICAGO.

PHILIP MARTINY, SCULPTOR.



West View Manufactures Building.

East View Electricity Building.

VIEW TOWARD THE SOUTH SCREEN, WORLD'S COLUMBIAN EXPOSITION, CHICAGO.



West Front Electricity Building.

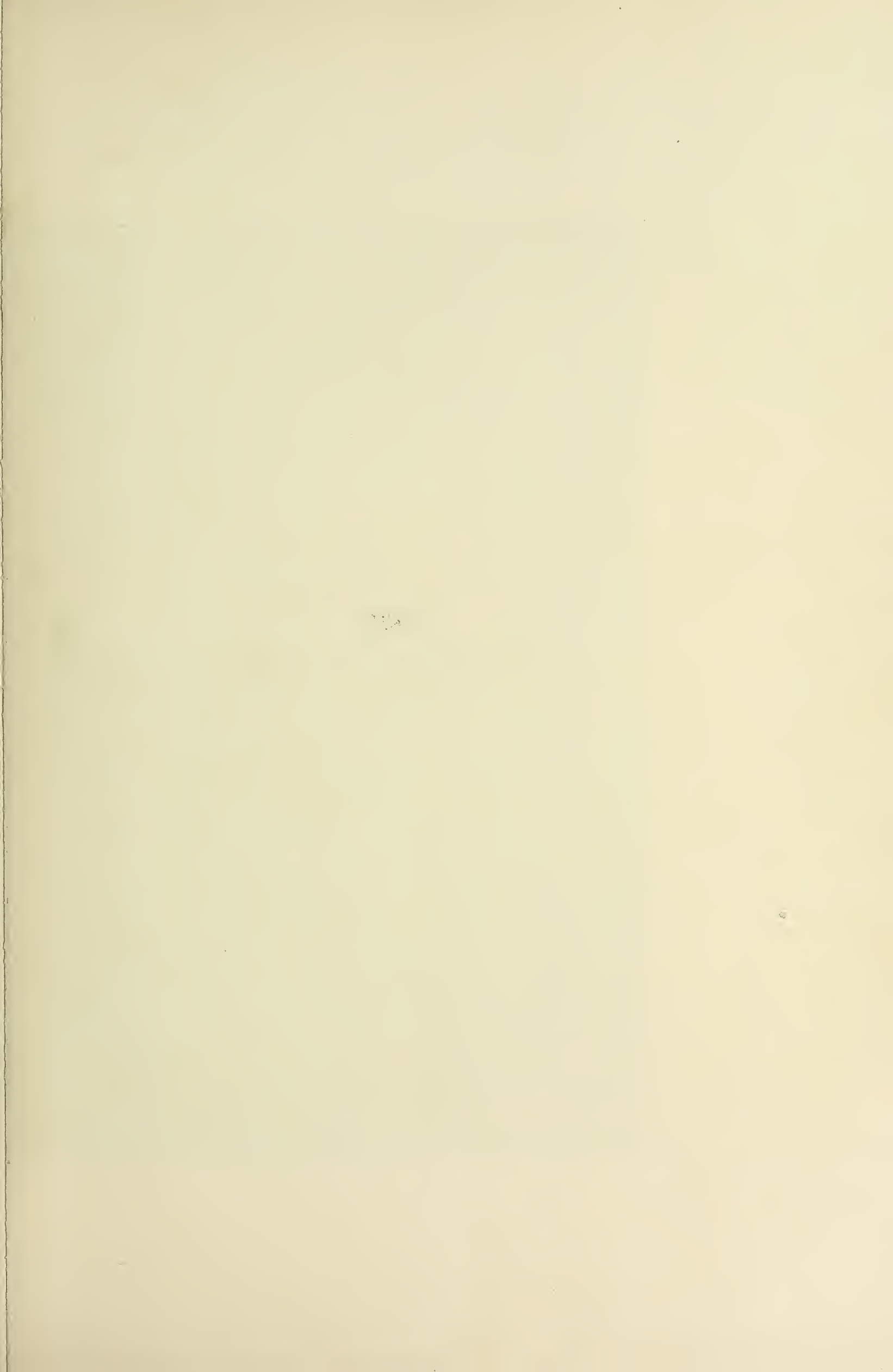
East Front Mines Building.

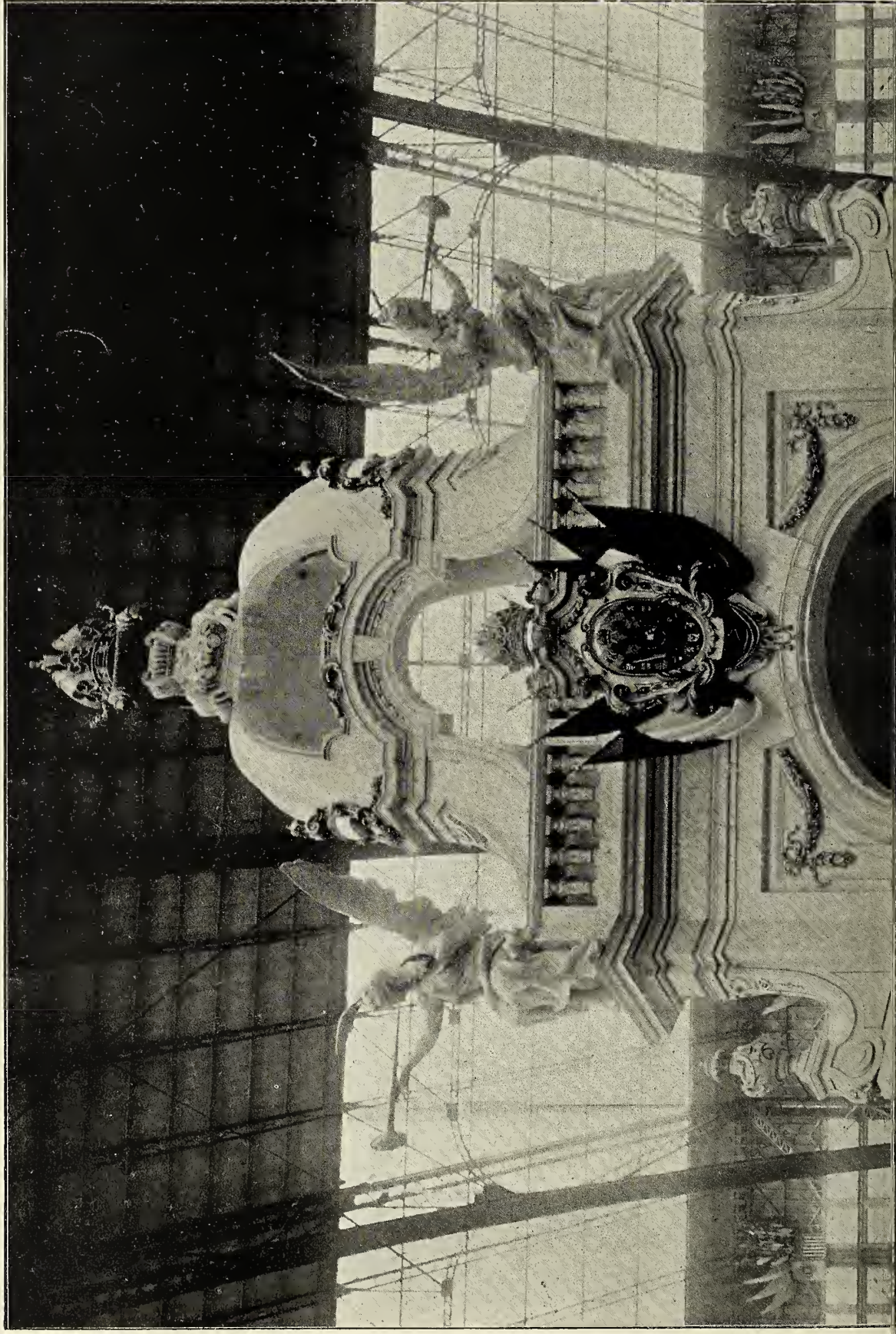
VIEW SOUTH TOWARD THE ADMINISTRATION BUILDING, WORLD'S COLUMBIAN EXPOSITION, CHICAGO.



HORSE GROUP, EAST ENTRANCE MACHINERY HALL, WORLD'S COLUMBIAN EXPOSITION, CHICAGO.

M. A. WAAGEN, SCULPTOR.



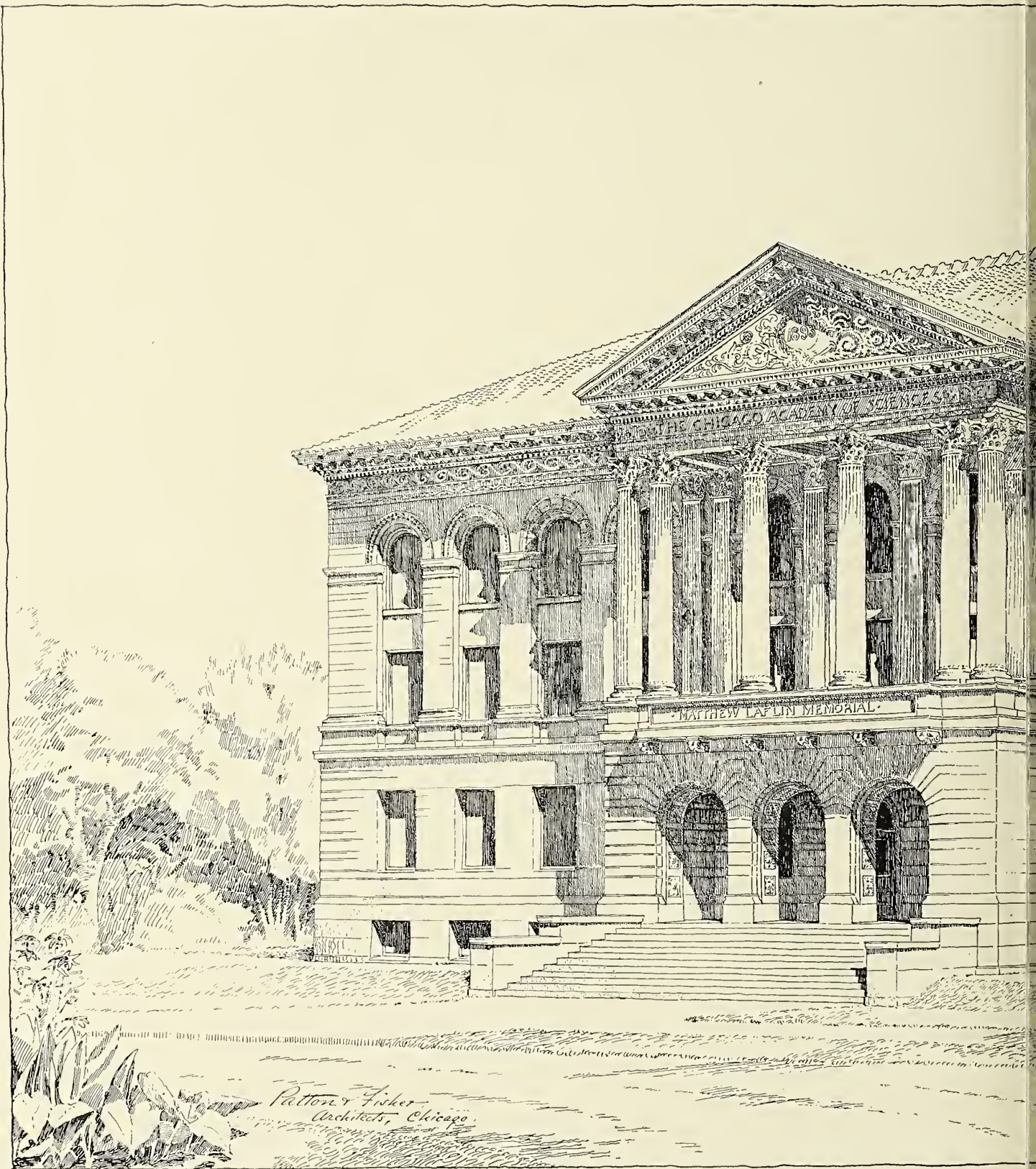




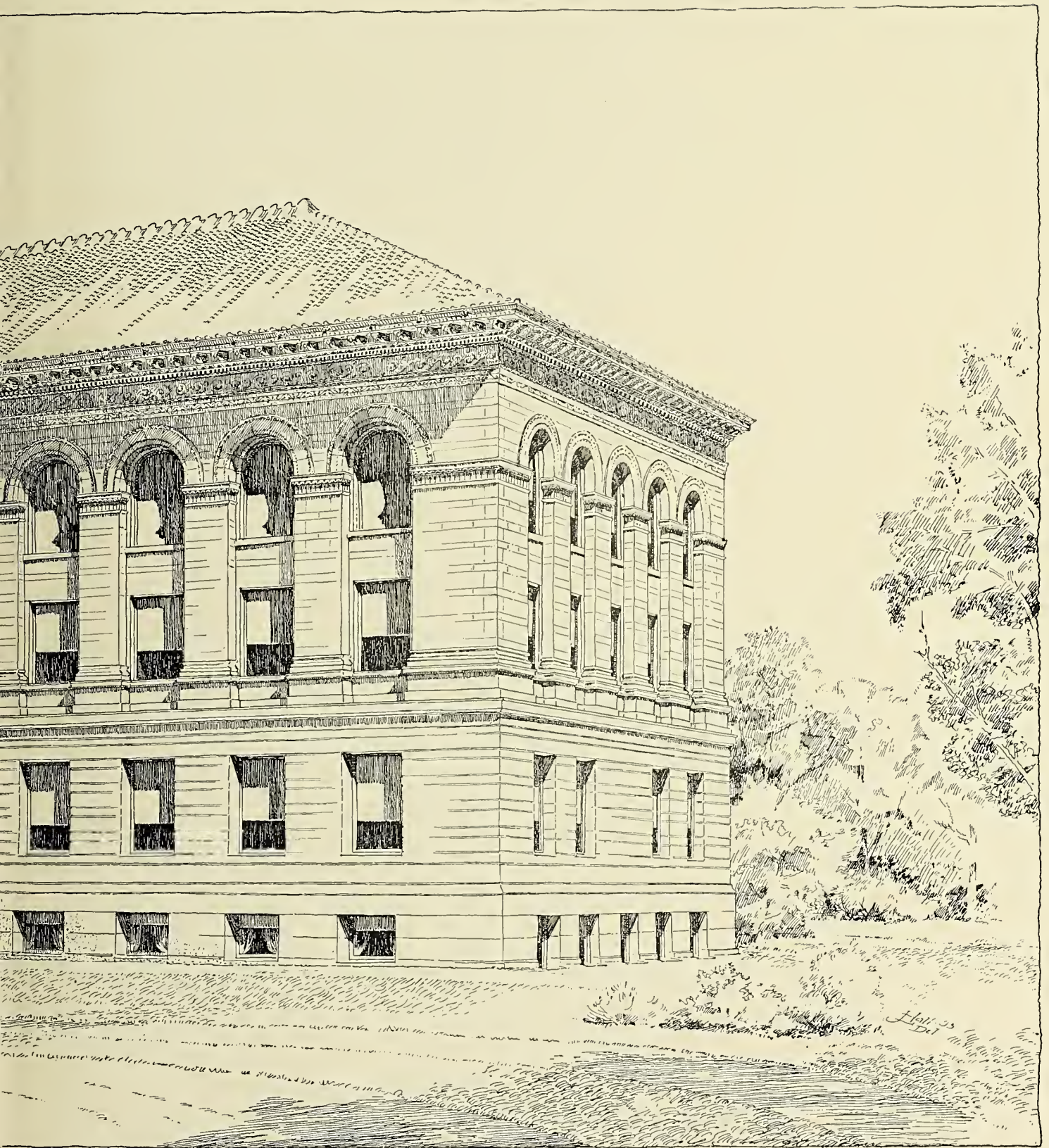
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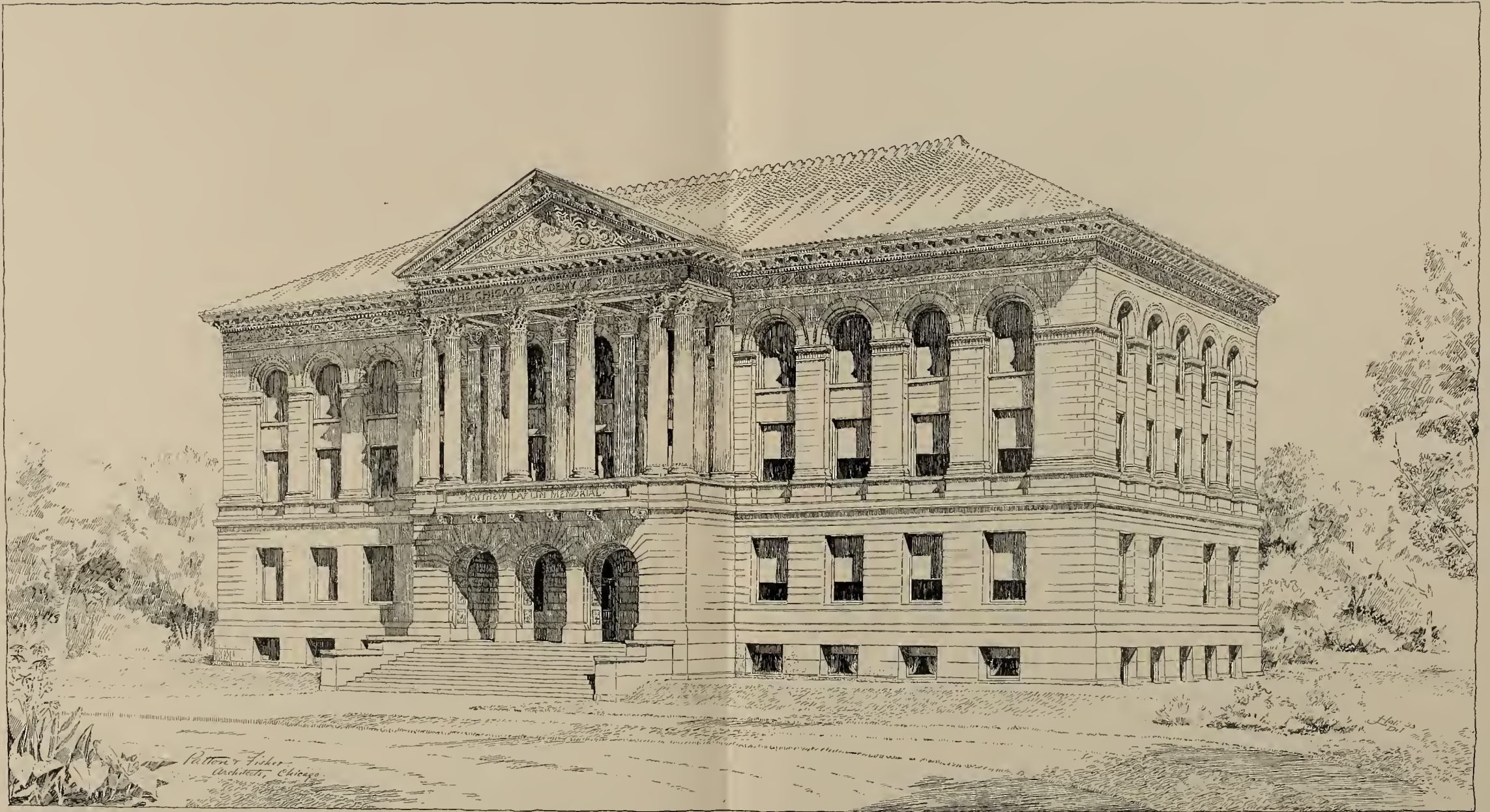
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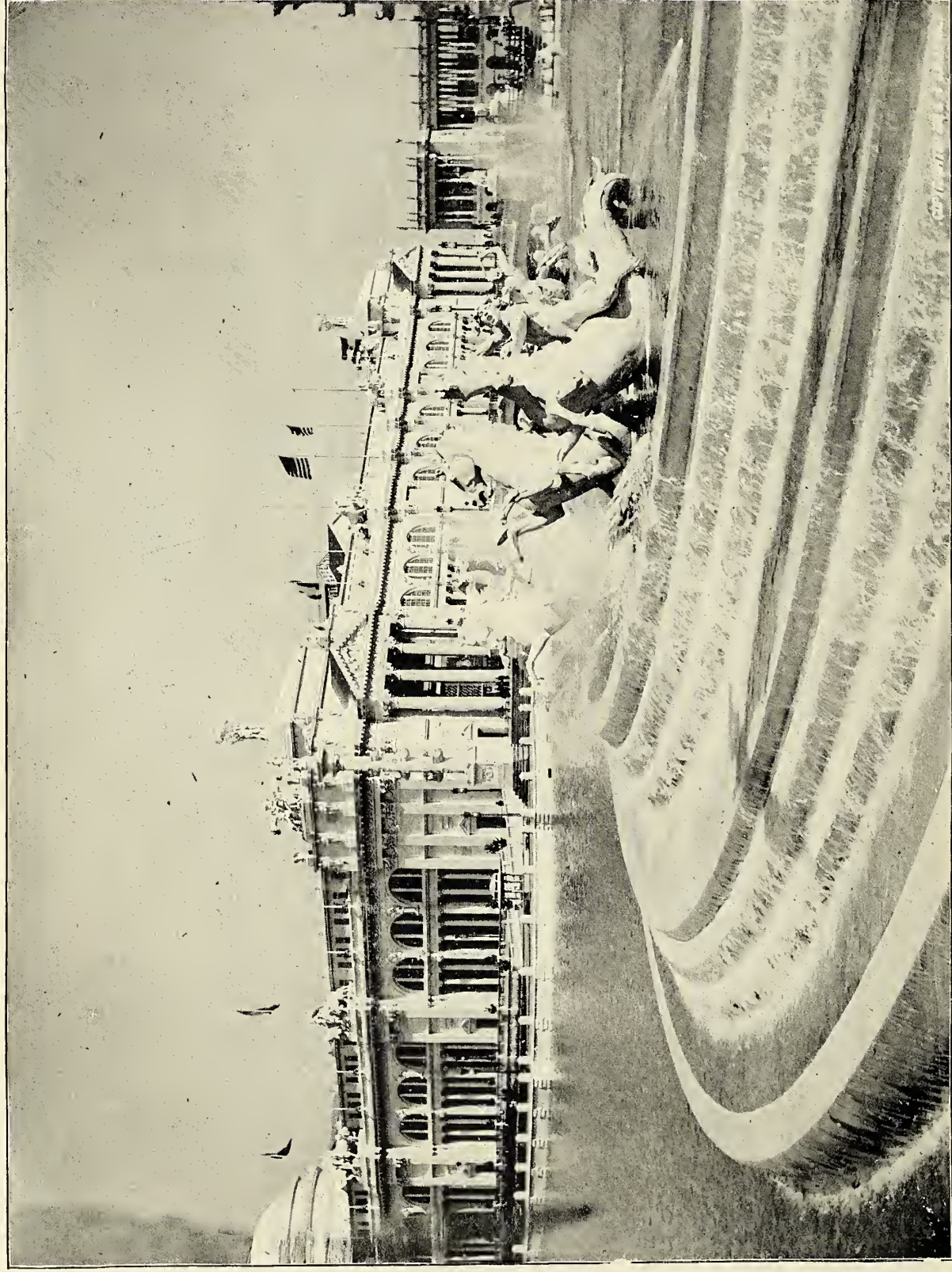
THE CHICAGO ACADEMY OF SCIENCES LINCOLN PARK



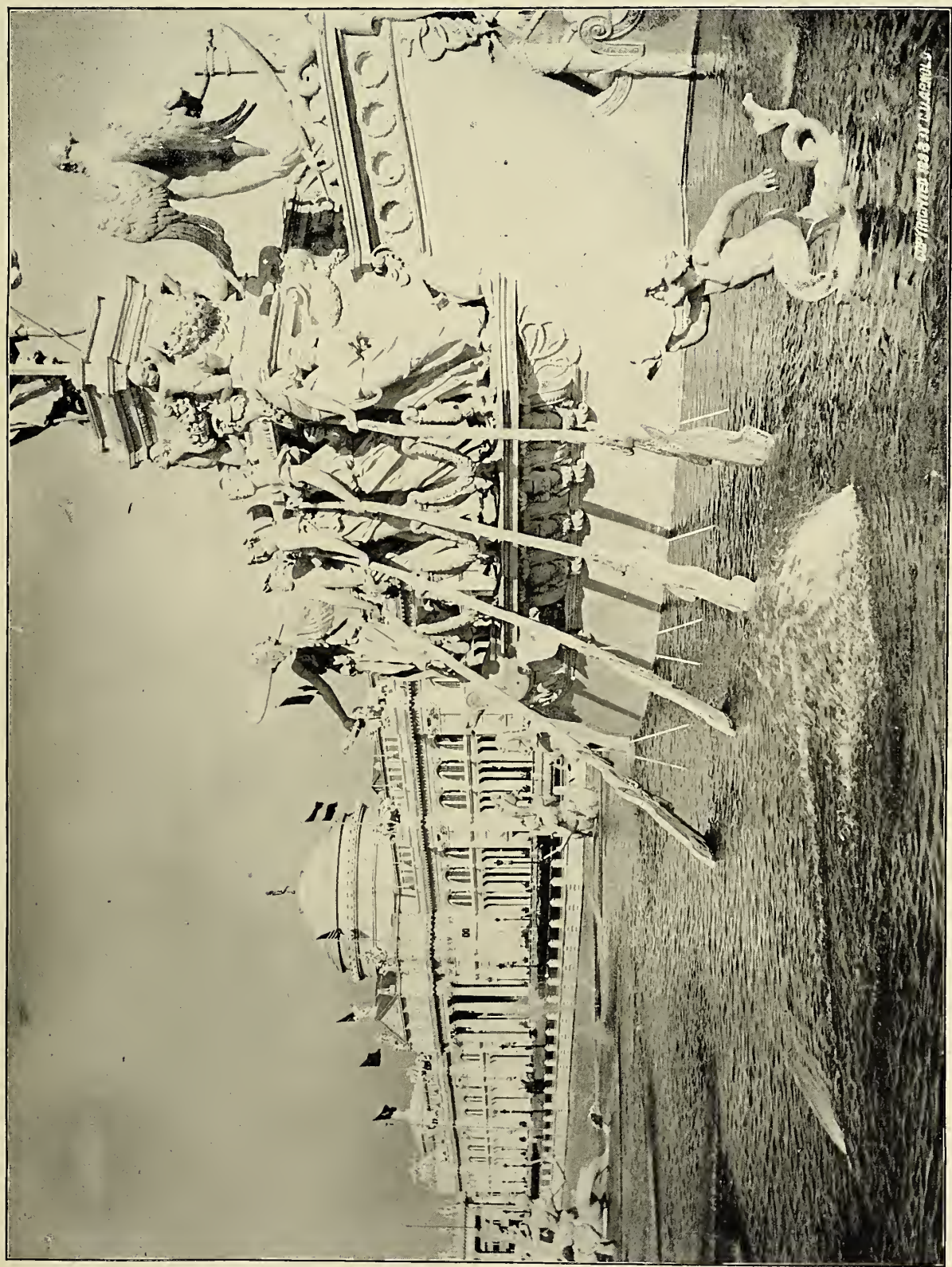
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WORLD'S COLUMBIAN EXPOSITION, CHICAGO.

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Contributions appropriate to its pages are always desired.

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Awards by the Columbian Exposition. On preceeding pages is given an illustrated descriptive mention of some of the awards which have been presented to exhibitors by the World's Columbian Exposition for superior excellence. It is our intention to continue these articles from time to time. Architects who have become acquainted with these firms through specification of their work will find their judgment of excellence indorsed and those who have not will have their attention directed to their superiority by this indorsement by the greatest competitive exhibition of the century.

Phenomenal World's Fair Attendance. One item in the history of the Columbian Exposition is so phenomenal as to be worthy of record. This is the attendance upon one day. On October 9 there were over 761,000 recorded admissions to the Fair grounds, 716,881 of which were paid. When it is considered that within an enclosure of 633 acres, of which 5,000,000 square feet was floor space under roof, there were gathered more people than the population of any city in the United States except three, and that for a week the attendance approximated 300,000 each day, the vast interest taken in the Exposition can be understood. Probably never since Xerxes moved his army across the Hellespont had there been such a congregation of so many people in so limited a space.

"Trolley" System Unpopular in Chicago. Until the installation of the telephone as a means of communication the great inconvenience to the public in the masses of overhead telegraph wires was borne, but with their multiplication for telephone use the number became so great that the demand for their removal underground became general. Chicago was the first city to take definite action, and has accomplished more than any other in the United States. The ordinance called for the removal of all overhead electric wires, and prohibited additions or repairs, so that in the business portion of the city all telegraph poles have gradually disappeared, and only an occasional large cable crossing the street from building to building is seen. But all this has not been accomplished without continued protest from those interested. Especially since the invention of the overhead trolley electric car system, constant effort has been made to secure the city's consent to operate within the city limits. All the main cable lines are met at their terminals by electric lines, and now the movement to establish them down town seems more determined than ever. It is hardly possible to conceive of a more objectionable, not to say dangerous, invasion of the public streets than this. Boston allowed it, and the trolley wire hangs about her neck with a tenacity of an old man of the sea. Even the smaller cities of St. Louis and Cincinnati know the vast mistake that was made when they allowed the "trolley" to invade their streets. Chicago, with her rapid growth, metropolitan stability and certain future, cannot afford to retrograde into the condition of a country village. If the city council should pass an ordinance, it is almost certain that the people would demolish the first trolley system instituted, and by force prevent its operation. It is not diffi-

cult to see that in Chicago all future additions to public convenience, either of communication or traffic, must be either underground or overhead, as the streets now are too much encumbered for business to be transacted safely and well.

Columbian Architectural Museum Project. As the architectural value of the Columbian Exposition gradually impressed itself upon not only the profession, but the people, and the fact of its ephemeral character caused all to regret that with the close of the Fair the buildings would be demolished, all sorts of schemes were broached for their preservation at least for another year. When even this was found impracticable the project of founding a Columbian museum was formed. Mr. D. H. Burnham, the Director of Works, whose work has been entirely one of enthusiasm, and to whom the credit of the ultimate success of the Fair belongs, has turned to this as the most feasible solution of the problem. While the museum will collect all exhibits that may be educational in their nature, the greatest, and that which will be most far-reaching and lasting will be the architectural. In this Mr. Burnham proposes that sections of all cornices, capitals and pediments, statuary, etc., shall be carefully preserved and stored until a suitable building can be procured for museum purposes. In the designing of the buildings some of the purest Greek, some of the best Renaissance and many other forms are found, all adaptable to modern use. A collection such as is proposed will equal in educational value a complete set of casts from all the best examples of Greek or Roman architecture. In the designing the spirit of modern intellect has added beauty to all lines, and in the distribution of sculpture and ornament the very imperfections seem to add life to the design. And this is the American architect's triumph. He seems to have succeeded in enriching the work while copying, and adding beauty while faithfully following the lines of the ancient model. In other than Greek forms is this apparent, for the India building, designed by a Chicago architect, is better Indian than any example erected at the Fair by the natives themselves. Therefore, it seems that no mere matter of money should hinder the directors of the Columbian museum in their work. No cast, no piece of architectural design, that has the merit of grace or purity should be allowed to be destroyed, but there should be gathered from this, the greatest architectural triumph of this, or, we think, any age, a museum of architecture such as will stand as an educator and director to the draftsman. The buildings cannot be taken away but in section and in motif they will be found scattered through every city and town, and in this way the longing of the people for their preservation will be accomplished.

Award of Medals to World's Fair Architects. The committee on awards of the World's Columbian Exposition, under the division of public work and constructive architecture, has granted an award to each architect who designed buildings at Jackson Park. The judges found that almost every structure had some point of superior excellence. The list is headed by Daniel H. Burnham, who, under the successive titles of Consulting Architect, Chief of Construction and Director of Works, reared the buildings and was the general executive officer, receives a medal and diploma. Frank D. Millet is awarded a medal and diploma as Director of Color and

Director of Decorations, under which titles he has successfully directed the interior and exterior decorations of all buildings, including the scheme of flags, banners, etc. Of the designers of buildings, Charles B. Atwood receives six medals for the designing of the Peristyle, Fine Arts, Merchant Tailors', Public Comfort, Terminal Station and Architectural Accessories. Other awards to architects in the United States were as follows :

Jenney & Mundie, Chicago Horticultural building; Solon S. Beman, Chicago, Mines and Mining building; Adler & Sullivan, Chicago, Transportation building; Henry Ives Cobb, Chicago, Fisheries and Indiana State buildings; Francis M. Whitehouse, Chicago, Choral building; Thomas P. Lonsdale, Philadelphia, Pennsylvania State building; James W. McLaughlin, Cincinnati, Ohio State building; McKim, Mead & White, New York city, Agricultural, New York State, Puck and White Star Line buildings; Bradford L. Gilbert, New York city, New York Central Railroad building; Henry Baron, Pennsylvania Railroad building; George B. Post, New York city, Manufactures and Liberal Arts building; Richard M. Hunt, New York city, Administration building; Mortimer S. Smith & Sons, Detroit, Michigan State building; William Waters, Oshkosh, Wisconsin State building; Sophia G. Hayden, Boston, Woman's building; Olmstead & Co., Boston, Landscape Architecture; Peabody & Stearns, Boston, Machinery building, Colonnade of Obelisk, Massachusetts State building, Virginia State building and reproduction of Mount Vernon; A. Page Brown, San Francisco, California State building; J. Riely Gordon, San Antonio, Texas State building; Seymour Davis, Topeka, Kansas State building; Van Brunt & Howe, Kansas City, Missouri, Electricity building, Wankesha Mineral Springs building; Cutter & Poetz, Spokane, Idaho State building; H. T. E. Wendell, Denver, Colorado State building; G. W. G. Ferris, Pittsburgh, Ferris wheel.

A large number of foreign architects whose work has been conspicuous and excellent have been awarded medals as follows :

C. Rabitz, Berlin, Pavilion of the German Viticulture exhibit; Sculptor Schlay, Berlin, Decorations for Porcelain exhibit; Max Seliger, paintings on wall in German Government building; Sculptor Seliger, Berlin, painting on wall of German Government building; Sculptor Osser, execution and ornamental decorations in German Government building; Wihl: Fleck, vestibule and reception room, German Government building; Johannes Radke, German Government building; Sculptor Neurenburgh, decoration of the Neurenburgh exhibit; H. T. Schmidt, Frankfort-on-the-Main, Krupp Gun Exhibit building; Karl Hoffacker, Berlin, decoration German department in Manufactures building, German Ethnographic Society buildings in German Village; Rector Karl Spatz, Kaisersern, architecture and decorations Strumm exhibit; Col. Robert W. Edis, London, "Victoria House" British Government building; Imperial Japanese commission, Government building of Japan; John P. Ropet, St. Petersburg, façade of Russian section, Manufactures building; M. Peter Beggin, Moscow, pavilion, Russian section, Manufactures building; Gust. Wickman, Swedish Government building; Ministerio Fomento, Madrid, Spanish pavilion; Emil Bressler, Vienna, "Old Vienna"; H. F. Tomlin, Ceylon, Ceylon building.

A large number of awards were also made for plans of construction of buildings and bridges, for decorative designs, etc., as well as for building appliances. It is observable, however, that in these lines the competition was not large enough to give the judges that degree of choice that would lend the charm of exceeding merit to the award. In the architectural list presented the subjects were carefully considered and the awards were clearly earned, in many cases the distinction not being adequate to express the singular merit attached to the work done by the recipient. It is matter of congratulation that architects have been so liberally recognized and regret that in most cases the work can only be perpetuated by photographs.

Ninth New York League Exhibition. The ninth annual exhibition of the New York Architectural League will be held from December 18 to January 9, inclusive. The league has become a powerful factor in architectural affairs from an educational standpoint, and its annual exhibitions and competitions present the best opportunity for competition in rendering and study in design that is afforded American draftsmen. Each year the movement seems to gather strength both in the interest taken in its work by the profession it benefits and in that of the general public. The programmes for the exhibition, and the seventh annual competition which takes place in connection with the exhibition, are printed on another page.

WORKINGMEN'S MODEL HOMES AS SHOWN AT THE EXPOSITION, AND CHICAGO'S PRACTICAL EXPERIENCE IN THE SAME DIRECTION.

BY P. B. WIGHT.

IT requires a certain amount of nerve to put examples of the humble dwellings for the poor on exhibition amid the palatial edifices that adorn Jackson Park. This has been done only by the two largest states of the Union, New York and Pennsylvania. By contrast these exhibits naturally look insignificant and comparatively few of the visitors notice them, but they are none the less important in the eyes of those interested in problems solved and to be solved in the housing of the poorer laboring classes. We say "the poorer" because the statistics given by the respective bodies behind them imply that they are intended to reach not only the means of the mechanic who earns from \$3.50 to \$5 per day, but the laboring man, the mill operative and the clerk, whose wages seldom exceed \$2.50 per day.

The exhibit, as a feature of the Anthropological Department, is incomplete, and would have been more satisfactory, and entirely practicable, had an effort been made to procure drawings and models of such workingmen's model homes as have been successfully put in operation in various parts of the country. Besides the New York and Philadelphia exhibits, which are complete furnished houses in full working order, we can find nothing else of the sort except in the large model of Pullman, where every variety of model dwellings can be seen, but where they are only small integers of this splendid exhibit in the transportation building. It is unfortunate that drawings of the workmen's different classes of houses at Pullman are not somewhere exhibited, for they would show the most perfect system of graded houses that has ever been put in operation on a large scale.

Herein we can only refer to what we find as part of the record of the Exposition and will not infer that it demonstrates all or the best that has been done in this direction. It shows only what Philadelphia has done and what New York proposes to do.

The Philadelphia house, a description of which may be best obtained by examining the drawings (see illustration sheets), is built on the north side of the Midway, near Stony Island avenue. It is the result of the individual exertions of Mrs. Ellen Duane Davis, of Philadelphia, and most of the materials were contributed by Philadelphia manufacturers and dealers. It is part of the Pennsylvania State exhibit, and is erected to show one of the best of three classes of workingmen's brick city houses, erected in rows in the city of Philadelphia. These houses are erected on lots fifteen feet wide and of an average depth of sixty feet, running back to alleys. The cost prices of the model houses of that city on such lots are \$1,400, \$1,800 and \$2,200. The \$1,400 houses are one story and cellar; of the \$1,800 houses, some are one story and some two stories, but they are without bathrooms or furnaces. The building exhibited is one of such as cost \$2,200 when built in rows frequently a whole block in length, giving the monotonous street aspects so common in Philadelphia. The plans for it were made by W. T. B. Roberts, architect, at Twentieth and Dauphin streets, Philadelphia. It is fifteen feet wide to the center of party walls and forty-three feet deep, not including the water closet and bay window. The front is of Philadelphia pressed brick, with sills and lintel courses of sandstone. The front basement wall above ground is faced with stone, and the entrance steps are of the same. The cornice molding and the buttress heads are of galvanized iron. The roof and the party walls are covered with tin. It also has a covered veranda west of kitchen and dining room that would not be used for houses in rows. It is heated by a furnace, but no ventilation flues are provided, the one chimney near the front furnishing only a smoke flue and space for furnace pipes. The parlor, therefore, has a dumb fireplace ornamented with a polished cherry mantel with mirror over the same. The dining room also has an oak mantel and mirror where there is no suggestion of a chimney. These are an unnecessary expense where they serve no useful purpose, and economy is of main importance, and suggest the possibility of their having been placed there for advertising purposes or to express the great liberality of the donor rather than as an illustration of what the workingmen of Philadelphia have. The same may be said of the large and highly polished black walnut wardrobe in the second story front bedroom. The woodwork throughout is grained in imitation of some hard wood, which is not only an extravagance but is not in good taste where plain tints

would look better. The entrance vestibule has a tile floor, and the sides are wainscoted four feet high with the same. But why have a vestibule at all? And why build a bay window at the rear of the second story? These and many other things about such a comfortable little house suggest that much money has been expended that might be saved to the advantage of whomsoever is to occupy and ultimately to pay for it. It may be that Philadelphians consider that, having succeeded so long in supplying the material wants of its workingmen, it is now time to cater to their esthetic longings. If so, and they are willing to pay the cost, so much the better. As regards the exterior of this house, it is a great advance over the vernacular Philadelphia front, even of buildings of a higher class, and as it costs but very little more, is a desirable and advantageous improvement.

The furnishings of this house are much more expensive than it is likely that any actual occupant would be able to supply, and even though they may be a contribution, it is in bad taste to use them for exhibiting the habitat of a workingman.

These buildings are erected in Philadelphia by the various building and loan associations, and sold to occupants on the installment plan. In a pamphlet circulated by the management there is published a series of answers by occupants of such houses to sixteen inquiries contained in a circular that was issued to them. From one of them it is seen that the house had been purchased for \$2,400 out of the savings of the family and a small amount not stated, and that only \$200 was still due on the purchase. The family consisted of a mother, three adult children, and one child. The income came from the adult children, and the housework was done by the mother, assisted sometimes by the daughters. The son earned \$11.50 a week, one daughter \$6, and the other \$4.50, being a total income of \$22 a week, or about the same as that of one Chicago mechanic, out of which they were living comfortably and saving some money, in Philadelphia. This is a demonstration that cannot be gainsaid, and if it is possible, perhaps the Philadelphians are right in providing the luxury of sham mantelpieces.

Another party, a compositor on \$25 a week, with wife and five children, after purchasing the house, lived on \$16 per week. Another man, working in a factory on \$16 a week, paid \$14 per month for a house, presumably of the \$1,800 kind, two stories high, with a bath, lived on \$14 per week, and saved \$2 a week for his building association assessment. His family consisted of himself, wife and infant child.

The New York model cottage (for plans and elevations of which see illustration sheets) was erected by the state commission. It is located near the windmills in the south part of the grounds. It does not assume to be an urban house, and therefore no close comparison can be made between it and the Philadelphia exhibit. It is admitted by the projectors that it would not be a practicable venture in any part of the corporate limits of the city of New York. The plans were drawn in the architectural department of the Pratt Institute, at Brooklyn, New York. The building is of frame, two stories high, with gabled shingle roof, and was intended to have a stone cellar but no furnace. The cellar was omitted in building it, but is part of the plan. This house covers only thirteen square feet less of ground than the Philadelphia exhibit, and has one less room. It is designed for use in the suburbs of small manufacturing cities. It can be built on a lot from twenty-five to forty feet wide and fifty feet deep. It is evident from the exterior that no thought has been given to making it in any way architectural. It seems to have been assumed that it matters not how a workingman's house looks so long as he has the convenience, comfort and sanitary arrangements necessary to his well being. This is a great error. Every such house is a blot to the landscape and an admission that the architectural art can do nothing for economical buildings, without ornamentation and added cost. Whoever designed it was ignorant of the fact that there are many ways of making a house agreeable to the eye without elaboration. In the hands of a designer who knows his materials, any building, however humble, may have some touch of art, and no such building can express the march of civilization without it. In this plan there seems to have been made a useless incision into the hallway (which, of course, cost more than to make the front line straight) to get more room for a covered porch. Otherwise the plan is admirable and almost beyond criticism. The interior of such a house can be made beautiful by inmates of good taste without the necessity for sham polished mantels, tiled hearths and vestibules. The only open fireplace is of neatly laid

bricks with a brick hearth. The woodwork and floors are painted in oil colors, as also the plaster walls. The ceilings are calcimined. It has the same plumbing as the Philadelphia house, but lacks some of the comforts, such as furnace heat and gas. It is deficient in facilities for artificial heating by stoves, but this could be easily provided for in its single chimney. Ventilation is provided. All the windows have green blinds on the outside.

The estimated cost of this house with cellar, according to full specifications, in the rural districts or the suburbs of interior cities of New York state, is \$1,000. It therefore offers to give as much room as the Philadelphia urban house for less than half the cost, but without some of the comforts. The object is, as stated, to provide houses that will rent for \$10 a month and pay a fair interest.

It must be said that this building presents few points of originality in plan. On the contrary, the plan of the Philadelphia house is different from those of other cities, except Baltimore, where similar plans have been in use for sometime. It is the result of a great deal of experiment in that part of the country and not a novelty there. Nor is the New York house a novelty, for thousands have been built all over the country so nearly like it that the difference could hardly be recognized. But the effort being made by its projectors is a laudable one.

It is very different from the vernacular cottage of Chicago and vicinity, a type that has been in use and has always proved to be economical and comfortable for thirty-five years past. It is interesting to know therefore that a Chicago workingman has already decided to build his house somewhere near Englewood on the New York plan. He has put it under contract for \$950. The variations will be the omission of the cellar (making it just like the model in Jackson Park in this respect), placing the side door in the rear, and building a rear veranda and outside woodshed, all of which are included in the contract.

It is doubtful, however, if this will ever supplant the Chicago cottage which once was the prevailing type of residence in this city, and for economy of room, if not for convenience, has never been surpassed.

It may interest some who are not acquainted with it to know a few particulars of this style of workingman's house that has never been called "a model," but has been the outcome of the necessity for a cheap way to build up a new and rapidly growing neighborhood. When a real estate man advertises in Chicago that a cottage is to rent, everyone knows what he means. Time was when even Michigan and Wabash avenues were adorned (?) with long rows of them, and, where spared by the great fire, they may still be found in old neighborhoods on the "West Side," while they are going up by hundreds in our mushroom suburbs. The plans have been little changed for thirty years, and architectural assistance has never been invoked for their adornment. This was always obtained from the ready made stocks of the planing mills and consisted of two window frames and a door frame for the front, with all the architectural decorations built on the outside of the frame ready to put up, and a lot of turned balusters for the balcony and the sides of the high entrance stairway. In plan and construction they are so simple as not to need a diagram. They are built on posts set on short planks just below the black soil surface. The posts are high enough to leave headroom between the ground and the under side of the first floor. This space, when closed in by vertical boards nailed to joists between the posts, forms a cellar above ground, which is woodshed, storage room for useless things, and laundry combined. When a flue starts from the main floor, a stove can be placed under the house which will keep the plumbing from freezing and help to warm the floor above. Above this the house is of one story with attic of triangular section above, and gable end to the street. These houses, if built on twenty-five foot lots, are twenty to twenty-two feet wide, leaving sufficient space between them when built in a row to give light all around. The first floor is framed on heavy sills that rest on top of the posts, for these will be needed when the house is moved, which may occur several times. The depth is from forty to sixty feet, according as how much room is needed. The entrance is always by double doors, though it is into a blind vestibule. This is to give a pretentious style to it. For in front of the door is a blank wall, and at one side is a single door into the parlor. The vestibule is generally six and a half feet square, which also gives grandeur. But in reality it is a screen for the row of subsidiary rooms and chambers. It is made just as wide as the rooms. The partition through which the door opens into the parlor runs straight through to the back of the house, and serves to support

the light attic joists. Supposing the entrance door is at the right side, the rooms to the left of the partition are divided off to suit the occupant. First is the parlor, next comes the dining or living room, connected with the parlor by sliding double doors. This is sometimes a large bedroom. Back of this is the kitchen, with perhaps closets between the two rooms. The kitchen is the last room, and has a back porch and stairs down to the yard. To the right of the long partition the rooms are divided off to suit. There are generally three bedrooms, a bathroom, and a stairway, which doubles on itself to the attic above. All these small rooms are entered from the large rooms. The house has really no hall, and the only stairway comes between two partitions. The latter is near the center of the house, so that in the attic it is possible to finish off a small room under the front gable, and another under the rear gable.

Such a house, it will be seen, can accommodate a large family, for it can have five, and even six, bedrooms. The main thing to recommend it is its cheapness. In 1860, \$600 was the cost of such a house. Now it will cost about \$1,000 in the suburbs of Chicago, on a lot the minimum price of which is \$300. They are always heated by stoves, and comfortable in winter. They are invariably ugly, and nothing has ever been done to improve their design. Still, by a sensible treatment of the balcony in front and carrying out the gable roof over it, the fronts are susceptible of great improvement at little cost.

During the early days of Chicago these were not alone workingmen's cottages; they supplied the wants of many people of means, and were made even luxurious by those who could afford it, at times when the demand for houses was greater than the supply.

Such cottages have made Chicago second to Philadelphia in the proportion of dwellings to families. If the families are now increasing in greater proportion than the dwellings it is not because of any deterioration in the mode of housing the people. Certain tenement houses of the worst kind have grown up, though never built more than four stories high. They are not and never will be like the tenement house of New York city. But the most extensive change of the last ten years has been due to the erection of an immense number of small two and three story "flat" buildings, which are a better investment on inside lots and offer more comforts and conveniences than any cottages that were ever devised. In 1890 the census showed that in Philadelphia the proportion of dwellings to families was as seven to eight, in Chicago as one to two, and in New York city as one to six. There is no hope for New York in providing model dwellings for the poor. It must be looked for in improved tenement houses and sanitary restrictions. All reform in this direction will have to be done in the suburbs and factory districts. In Chicago we have Pullman, a whole city of model houses that has been in practical operation for many years. Our suburban cottages and city flats will have to supply the wants of those who cannot afford isolated houses. Philadelphia will undoubtedly take the lead in providing home comforts for the masses as she has done for many years. Having succeeded in this, her attention should next be given to providing the poor with more esthetic surroundings and the elevating influences of art. It is not possible just now to say how this can be effected. But the monotony of the dwelling house districts of Philadelphia is proverbial, and must produce a depressing effect upon the residents. For, comfortable as these houses are, as now built, they suggest only a city of military barracks or hospital wards.

PUBLIC COMPETITION OF ARCHITECTURE.*

A STUDY devoted to the organization of public competition could scarcely include questions which present themselves before the opening of these competitions; notably the examination of the advantages and inconveniences of the system itself, and the circumstances which render it useful, or, on the contrary, somewhat dangerous. Here, as elsewhere, there is no absolute rule, and it is for the intelligence of the interested administration to weigh both sides carefully, and to determine, in each special case, the proper method of competition. All that can be said on this subject is, that it is always prudent on such special occasions to take counsel with approved advisers.

In general, the placing of projects in competition can scarcely be objectionable when the character of the work is to be, above all, artistic, comprising an original conception, an effort of imagination; it is less practicable when the object is a utilitarian

* Written by Mr. J. Guadet, Vice-president of the Central Society of French Architects, and presented by F. Adolph Bocage, Delegate of the Central Society, before the World's Congress of Architects, Chicago, August 4, 1893.

construction requiring patience and successive combinations, continuous elaborations, numerous conferences and the incessant retouching, not only of the plan, but also of the programme itself; in fine, the proper course may depend even upon questions of persons. If the building has no architect or if the architect has not required talent for the new work, certainly there are no acquired rights which should prevail against the greater interest involved; but, if the building to erect is of a kind demanding above all a thorough knowledge of special needs, and if the architect has given serious proof of experience and talent, it is unjust to deprive him of a reward to which years of faithful service entitle him. Here a serious reflection arises; not a question of acquired right which public interest should perhaps disregard, but a question of a general and much higher interest. If the method of competition were generalized too much, its great danger would be the disaffection between the architect and the administration of his client—on one hand, the loss of interest; on the other hand, a client of circumstance; on both sides, temporary restrained relations which end with the final receipt. These considerations can only be indicated here; the question is grave and deserves a profound study. In short, competition is often an excellent method; sometimes also a mistake. With these reservations, it is well to examine its best conditions, and such is the object of the present study.

NUMBER OF PRINCIPLES TO BE APPLIED TO COMPETITIONS.

The organization and the operation of a public competition comprises three phases and three distinct subjects: First, The preparation of a competition by the administration interested. Second, The execution of a competition by the artists. Third, Its judgment by a competent jury.

Before entering into the examination of the best conditions of preparation, of execution and of judgment, it is well to observe the general character of a public competition, what is legitimate to expect of it, and what is illusory. Competition is a means employed by the administration for obtaining one or more projects superior to those produced by direct order. Without doubt the administrations in opening a competition consult their own interest rather than that of the competitors.

From this is drawn a first principle; that is, competition involving necessarily an expense for the administration should have a special fund distinct from the building fund. Administrations have, besides, an interest in largely endowing the funds applied to competition: First, from a sense of justice, as the expense is considerable for the competitors, who are poorly reimbursed; then, because the number and value of projects will be proportionate to the importance of the premium distributed. The competitor, on his part, by the fact alone of his participation in the competition, binds himself to accept its condition, and surely the giving up of his project to the administration implies, if he is rewarded, not only the absolute giving out of his drawings, but of the ideas contained in this project, and consequently the renunciation of the artistic property of his work.

But there is the limit of the right of the administration, and it would have none, for instance, to sell those drawings or to permit their reproduction. As to the unrewarded projects it is evident that the administration cannot dispose of them for any reason. Difficult, impossible perhaps, as it may be, to secure a legal sanction of respect due to works temporarily confided to the loyalty of the administration, there is an imperative rule of honor in competition and a strict duty of simple probity.

Most frequently administrations fall into deplorable illusions over the results which may attend competition. In general, the first studies only are asked, but administrations often believe that they may expect a definite solution, a project *ne varietur*, and even exact prices. This is a complete error full of endless embarrassments and inevitable suits at law; it is a mistake to exact of the competitors a quantity of drawings on a large scale, involving great expense, when some plans, façades and vertical cuts on reduced scales are sufficient to designate the best composition. In thus increasing the expense, a great number of competitors are lost, and, what is worse, the elements of the judgment are false, for a sketch or a first study is almost personal, while a scheme developed on a great scale is almost of necessity a work of several draftsmen. In some competitions, they have gone so far as to ask for details of execution that have no value in the judging of projects. Besides, for those who know a little of the preparation of architectural projects, it is certain that a definite solution cannot be expected. Fifty or a hundred architects cannot, each one, do the enormous work that the complete study of an edifice even to its final details requires, a study which lasts as long as the building itself. Besides, a programme as clear and as detailed as it may be will never be sufficient; the architect must have numerous interviews with the administrators, chiefs of service, in order that each distribution, each installation may be discussed; there will be later modifications and the needs even may change in the course of construction. Nothing could be either more deceptive or more dangerous than a pretended invariability of detail and execution from the start of the construction, and the administration which could by its imperative requirements confine the author of the project in close barriers would have imprisoned itself to its own very great prejudice.

Evidently it is the same for expenses; an illogical confusion arises between competition and adjudication. The programme of the competition recently opened by the department of Aube, for the construction of its prefecture, is a striking example of this confusion. It reads thus: "Those first studies should comprise the execution of all the works indicated in the programme and be

composed of," * * * "Of an engagement taken by a contractor to do the work mentioned according to prices by the author of the said project, the contractor to present guarantees of solvency."

Such a clause is chimerical and impracticable. Competition cannot give a definite and fixed project; the expense cannot then be fixed invariably; but later, when the adopted project shall have undergone the various phases of definite study, when the necessary approval shall have accurately determined its *ensemble*, its details, its construction and installation, even to its decoration, the administration will have the choice between two systems; either the adjudication by contract, if it consents at its risk to deprive itself of all modifications and to wait to sign bargains until all the details even to the last touch of painting be determined irrevocably, or the adjudication with rebate upon series of prices, which is the true administrative rule; but in both cases, the adjudication applies to persons entirely different from the competitors; the architect has nothing to do with it, it is the contractor alone who at this moment enters upon the scene; and it is only by an unaccountable confusion between the two professions that inconsiderate conditions could be introduced into competition programmes, giving at best chimerical securities and nullifying all guarantees of the administrations themselves. Vainly are detailed estimates demanded in competition programmes; never—a constant experience shows it—never are those estimates seriously examined, never are they held in account in the judgment.

It is because this verification is simply impossible—whole months would be necessary to examine effectually a great number of estimates; it is even impossible to do it without numerous conferences between the comptroller and the author of the project. The truth is, as the competition in its conception and arrangement can only produce preliminary projects, so it can only give general estimates by way of indication.

These experimental truths may surprise if a false idea exist about the purpose and the extent of the competition. They are evidence itself if competitions are really understood, that is, proposition of ideas capable of producing a successful solution of a programme, but reserving definite decision. Besides, we can speak with authority, as we have an example which cannot be denied. The direction of the works of Paris has placed very important edifices in competition for twenty years; it does not ask for estimates (properly so-called); it limits itself to indicate an approximate expense, and to ask a summary valuation. Thus, for the competition of the arsenal of the Celestins in Paris, the programme said: "Art. 7.—Each competitor will produce, first, an explanatory note of his project; secondly, an estimate of the expense by surface meter for the *ensemble* of the constructions, and, if it is necessary, a special estimate also by surface meter for each different part of the project, and a resumé, established according to this basis, of the total expense expected for the execution of his project; third, a summary description of the construction. The estimate, accompanied by the explanatory note of the project and description of the work, will be verified by the revisors of the architectural service." The competitors could add to the required papers others which might seem to them appropriate for the intelligent appreciation of their study. And, indeed, be it well known, the true cases of valuation is not the estimate, which signifies nothing; it is the project, and a competent jury can always, by the examination of the project, decide what should be the approximate expense of construction by the surface meter, and, in any case, classify the interesting projects with much more certainty than by reference to the figures of the estimates. On the manner itself of competitions, there are no fixed rules, there are international competitions, national competitions in greater number, and finally those of departments. There are competitions of two degrees, and more often one degree. The custom of international competition scarcely exists in France, although that of the New Opera was international; it is more extended in foreign countries, and very important international competitions have taken place, namely, for the completion of the Milan and Florence Cathedral, for the Exchange of Amsterdam, for the palaces of the Senate and Chamber of Deputies of Bucharest, etc., etc.

(To be continued.)

ANNUAL CONVENTION OF WESTERN NEW YORK CHAPTER, A. I. A.

THE sixth annual meeting of the Western New York Chapter of the American Institute of Architects was held in Syracuse, New York, at the Yates Hotel, and called to order by F. H. Gouge, president of the Western New York Chapter of the American Institute of Architects, at 3:20 P.M., September 28, 1893.

After the roll call by Secretary Bickford the annual address was delivered by the president, and the views as set forth upon the future sphere of usefulness and field of action for the Chapter were heartily applauded by the members present. The address was as follows:

GENTLEMEN OF THE WESTERN NEW YORK CHAPTER OF THE A. I. A.: What can the Chapter do to arouse this enthusiasm. This question has undoubtedly been often in your minds. It was the main topic for discussion at the last meeting of the executive committee, and the secretary was instructed to mail to each member the circular letter which you have received with the call for this meeting, with the hope that each member would respond with full and frank suggestions and criticisms, as a guide to the committee in shaping the future management of the Chapter. And what is to be the future of the Chapter rests with you. The labor of officers or committees will be futile without the generous support of the members, and the members can render this support in no better way than by attending the conventions. With the past history of the Chapter you are all familiar. It has done some good work, and not the least that it has accomplished has been in an indirect way.

In regard to what this Chapter has done, among other things, it may well recall the efforts made to carry through the licensing bill. The work was long, earnest and persistent, and would have been successful had the governor chosen his advisers with any idea of being advised with reference to the merits of the bill. But the work then done has not been lost.

And now, what further can the Chapter do? That question, I hope, has been answered and outlined by many of you in your replies to the secretary's circular letter. But this certainly we can do: make a supreme effort to attend the conventions. We should not only look to the welfare of our own organization, but also to that of the American Institute of Architects. At the present time the only means of access of new members to the institute is through the Chapters, and there are many architects scattered throughout the towns and cities of Western New York who are desirable men. These men should be reached. This organization is the natural home for them and their sponsor for membership in the institute. Do not misunderstand me in that I would belittle the importance of local Chapters. They are the very best life-blood of the institute. They are of peculiar and great benefit to members in cities large enough to sustain them.

But I do believe that this organization reaches out to and covers in a way that local organizations cannot the smaller towns and cities which lie almost in touch of each other throughout the territory that we call Western New York.

The By-Laws were also amended by giving to members the right to vote by proxy. It is to be hoped that this will not lessen in the minds of members the importance of attending the conventions and voting in person.

The profession today that is not fully organized and that cannot count upon a full and enthusiastic attendance at its conventions is lagging in the race for professional advancement. It is simply necessary to direct attention to the organizations of the so-called learned professions to prove if this is not true. Can your profession be an exception to the others? Does it call for any less skill? Does it call for any less learning and continuous study to fit its members for successful practice? Are its responsibilities any less? But rather, are not the requirements and responsibilities of our profession even greater, more varied and broader than these? All the more then as a means of mutual advancement and protection should we muster and concentrate our energies by a complete and thorough organization.

The minutes of the last convention were read by Secretary H. H. Bickford, and were approved as published in the *Architectural Era*.

Treasurer Block, of Rochester, being absent, no report of the treasurer for the past year was submitted to the convention, and upon motion the treasurer's report was referred to the Executive Committee.

The report of the Executive Committee was as follows:

That there have been two meetings of the Executive Committee since the last annual meeting at Buffalo. Two applications for membership to the Chapter have been received and indorsed by the Executive Committee, and the names will take the usual course for election. Quite a number of names have been recommended to Executive Committee for admission to the Chapter, and no names have been dropped from the roll during the past year.

The Executive Committee report a very limited response to the circular letter sent out previous to this meeting of the Chapter, and that therefore the means adopted for getting the views of members, who have not taken time to attend the last conventions, upon important matters connected with Chapter work have not been as successful as we could wish. The Executive Committee would recommend that each and every member present use his utmost endeavors to maintain interest in the association, and keep in touch with the Executive Committee in their efforts to build up the Chapter, increase the membership by desirable additions to the same, and thus lay the foundation for what will be a lasting benefit to every member of our Chapter, from a social and professional point of view, and also for those who are to come after us. The Executive Committee very much regret to state that death has during the past year removed one of our number, Mr. J. P. Johnston, of Ogdensburg.

Respectfully submitted,
 F. H. GOUGE,
 H. H. BICKFORD,
 OTTO BLOCK,
 J. H. PIERCE,
 W. W. CARLIN, } *Executive Committee.*

On motion, report of Executive Committee was ordered received and placed on file.

The balloting for the election of officers resulted in the reëlection of all the present officers of the Chapter, as follows: President, F. H. Gouge, Utica, N. Y.; secretary, H. H. Bickford, Elmira, N. Y.; treasurer, Otto Block, Rochester, N. Y.; first vice-president, W. S. Wicks, Buffalo, N. Y.; second vice-president, O. K. Foote, Rochester, N. Y.; for members of executive committee to act with the president, secretary and treasurer—J. H. Pierce, Elmira, N. Y.; W. W. Carlin, Buffalo, N. Y.

In the general discussion following regarding the future prospects of the Chapter a very interesting programme was mapped out for the next annual convention, and much enthusiasm was manifest by all present, and a determination was shown to make the future conventions so interesting and profitable that no member could afford to be absent.

It was decided to have an exhibition of drawings submitted by members of the Chapter, and the chair was empowered to appoint a committee to take charge of the exhibition of drawings, committee to be made up of resident members in the city where the executive committee decide to hold the next annual meeting.

The chair was also, by resolution, empowered to appoint a committee of one to take charge of and provide for discussion of subjects of professional interest, and for the furnishing and reading of original papers on professional topics; this committee to receive instructions to report to the Executive Committee as early as January 1 preceding the annual meeting.

The chair then made the excellent appointment of Prof. C. Francis Osborne, of Cornell University, as committee of one.

The subject of holding an annual banquet was then discussed, and the unanimous opinion seemed to prevail that the banquet, which had been abandoned for the past two or three annual conventions, should take place after each convention, and the Executive Committee were empowered to appoint a sub-committee to make arrangements providing for the banquet, the expense of which was to be borne by the members accepting invitations to attend, instead of by the architects in the city where the convention is held.

Various opinions were advanced in regard to the manner in which papers should be received and read; the advantages derived from free discussion of the subjects, or topics, set forth in papers presented seemed to be fully appreciated, and the suggestion of giving out the subjects of the different papers to members in

advance, in order that they might prepare themselves for a more interesting discussion and a deeper insight upon the subjects treated, seemed to meet with universal approval.

There being no further business, the motion to adjourn was made and carried.

Those of the members who remained during the evening in the city were very pleasantly entertained by Mr. Charles F. Colton, of Syracuse.

ASSOCIATION NOTES.

THE CHICAGO ARCHITECTURAL SKETCH CLUB.

The Chicago Architectural Sketch Club began its fall meetings on September 4 by an informal reception to Mr. R. C. Spencer, of Boston. About sixty of Mr. Spencer's superb collection of water-color sketches were hung upon the walls of the club reception room, and were studied with a marked degree of interest by about fifty of the club members who were present. The sketches were made by Mr. Spencer in Europe during 1891 and 1892, as the winner of the Rotch Traveling Scholarship of the previous year. Mr. Spencer concluded the evening by a short description of the pleasures and difficulties attending the traveling draftsman in Europe, and to a number of draftsmen about to take a European tour his remarks and answers to questions were extremely valuable. Mr. Spencer has located at Chicago with Shepley, Rutan & Coolidge, architects. His traveling companion, Mr. Dean, was also present, and several other new faces were observed, which shows that the membership of the club is already being added to and with a high class of draftsmen, which gives an encouraging outlook for the year's work.

September 18, Mr. T. O. Fraenkel exhibited a superb collection of water colors, done during the summer. The scenes are from the vicinity of the Straits of Mackinaw.

THE ARCHITECTURAL LEAGUE OF NEW YORK COMPETITION.

The seventh annual competition for the gold and silver medals of the Architectural League will be given in connection with the ninth annual exhibition of the Architectural League of New York. The conditions are as follows:

First.—The competitors must be residents of the United States and under the age of twenty-five.

Second.—The drawings shall be made in conformity with the following programme, and entirely by the hands of the competitor.

The awards will be made under the direction of the Committee on Competition and Awards.

The successful drawings, and such others as may be thought worthy, will be hung at the exhibition, the first and second prize drawings being so indicated, and these latter shall become the property of the league.

PROGRAMME.

"A Village Church in the Colonial Style.

The church is supposed to stand some distance back from a village street, with terrace approaches. A belfry is to be a feature of the design.

The interior of the church is to have a gallery across the front wall, with vestibules beneath.

Only the front of the church with the necessary entrance and vestibule is to be shown. In a general way the materials of construction are to be noted on the elevation.

The drawings will be placed on two sheets, each 24 by 36 inches, one sheet containing a section and elevation to scale of $\frac{1}{8}$ inch to the foot, and a plan to scale of 1-16 inch to the foot; the other sheet, a perspective view.

Each sheet must be distinguished by a motto or cipher. A sealed envelope bearing the same motto or cipher must contain the name, full address, place and date of birth of the author, and must be mailed to the Committee on Competition and Awards of the Architectural League, No. 215 West Fifty-Seventh street, New York, on or before December 5, 1893.

Drawings are to be delivered flat, carriage paid, at the same place. They will be returned at the close of the exhibition at the expense of the contributor.

GEORGE L. HEINS, chairman, } *Committee*
 EHRLICH K. ROSSITER, } *on*
 EDWARD H. KENDALL, } *Competition*
 JOHN DU FAIS, } *and Awards.*
 FRANCIS C. JONES, }

THE ARCHITECTURAL LEAGUE OF NEW YORK.

The ninth annual exhibition of the Architectural League of New York will be held at the American Fine Arts Society's building, 215 West Fifty-seventh street, New York city, from Monday, November 18, 1893, to Tuesday, January 9, 1894, inclusive.

The exhibition will include: Architectural designs embodied in plans, elevations and sections and shown in perspective; finished detailed perspective drawings; designs for decoration, furniture and allied work; cartoons for stained glass; full-size working drawings for ornament; models of executed or proposed work; completed work, such as carvings in stone or wood, bronze, wrought iron, mosaic; glass, textile fabrics and furniture; sketches, drawings and paintings of architectural or decorative subjects.

Photographs will be admitted only when they serve to elucidate an accepted exhibit.

It is especially requested that all perspective drawings of architectural subjects shall be accompanied by plans drawn to a small scale.

Exhibits will be received at the Fine Arts Society's building on and after Wednesday, December 6; none can be received after Tuesday, December 12.

The League will collect and return, free of charge to exhibitors, in New York city, Philadelphia and Boston, all exhibits that have been properly entered; all others must be delivered at the Fine Arts Society's building, carriage prepaid and ready for exhibition.

The private view of exhibitors, the press and members of the Architectural League will be given on Friday, December 15, from 10 A.M., to 4 P.M.

Collections will be made as follows: In New York city on Thursday, Friday and Saturday, December 7, 8 and 9, by W. S.

Budworth & Son, No. 1 West Fourteenth street. In Boston, on Wednesday and Thursday, December 6 and 7, by Williams & Everett, 190 Boylston street. In Philadelphia, on Wednesday and Thursday, December 6 and 7, by Isaiah Price, 10 South Eighth street.

Blanks must be filled out and sent to the secretary before November 24. No work will be sent for unless the entry for it has been received by the secretary, Mr. Charles I. Berg, No. 10 West Twenty-third street. All exhibits must be properly labeled, and drawings must be either framed or mounted.

Exhibits of non-resident members are to be sent to a consignee in New York, who will deliver them at the Fine Arts Society's building, and return them to the exhibitor at the close of the exhibition. The names of such consignees are: William S. Budworth & Son, No. 1 West Fourteenth street; Thomas A. Wilmurt, 54 East Thirteenth street; J. Harrison Mills, 147 East Twenty-third street.

The Committee on Exhibitions, which will be the jury for the selection and arrangement of all exhibits, is: George B. Post, chairman ex-officio; Warren R. Briggs, ex-officio; Frank A. Wright, ex-officio. Sub-committee on architecture—George Keister, Bruce Price, William B. Tuthill, chairman. Sub-committee on decoration—D. C. French, Will H. Low, F. S. Lamb, chairman.

SKETCH CLUB OF NEW YORK.

The regular October meeting of the club was held on Saturday, October 7. It was the first meeting in the new rooms, 1473 Broadway near Forty-second street, which are much larger than the old quarters and better adapted for serving dinners. Forty-five members sat down to dinner and over fifty were present during the evening. Mr. Richard M. Upjohn was the guest of the club and spoke of his recollection of the building of Trinity church, of which his father was the architect. He also criticised the designs for a Gothic rose window, handed in at this meeting. There was also an informal exhibition of summer work, forty-five sketches, mostly water-colors, being hung on the walls. The regular winter classes of the club will begin this month.

ST. LOUIS CHAPTER A. I. A.

The third annual meeting of the St. Louis Chapter of the American Institute of Architects was held on the evening of September 26. The following gentlemen were elected to serve for the ensuing year: President, Thomas B. Annan; vice-president, William B. Ittner; treasurer, Charles K. Ramsey; secretary, Alfred P. Rosenheim. The Chapter numbers now thirty members, divided as follows: Regular, seventeen; associate, nine; honorary, four.

OUR ILLUSTRATIONS.

Chateau de Chaumont, J. W. Krause, del.

Some recent work by Vost & Packard, architects, Columbus, Ohio.

Dr. Whitney's House, Denver, Colorado. Sketched by W. Cowe.

Residence of Frank Hamilton, Momence, Illinois. Willett & Pashley, architects, Chicago.

Cottage of Frank E. Richmond. Stone, Carpenter & Wilson, architects, Providence, Rhode Island.

House for C. H. Montanye, Atlantic Highlands, New Jersey. Manly N. Cutter, architect, New York city.

New York Workingman's House, illustrating article "Workmen's Model Homes," by P. B. Wight, architect.

Lake Shore Cottages for H. P. Hayes, Athol Springs, New York. Ulysses G. Orr, architect, Buffalo, New York.

Office Building, corner of Washington and Water streets, Boston, Massachusetts, and details for same. C. H. Blackall, architect.

Philadelphia Workingman's House, World's Columbian Exposition, Chicago. Illustrating article "Workingmen's Model Homes," by P. B. Wight, architect.

American Express Company Stable, Chicago. Jenney & Mundie, architects. The building, which was completed in 1892, has four stories and basement, and is 360 feet long by 106 feet wide. It is bounded by three streets and an alley. The exterior is red pressed brick, with terra cotta sills and trimmings, and with a jasper stone base, the stones being very large. The three main entrances are each 14 feet wide and 16 feet high. The side jambs are covered with massive plates of $\frac{3}{8}$ -inch rolled steel. The voussoirs and sign above are terra cotta. Fireproof construction was used. Phoenix columns carry the floors—the outside walls are simply self sustaining. The floor beams are 20-inch steel I's of 27 feet 4 inches span, and the girders are built plate and angle 20 inches deep and 20 feet in span. The floor arches are 5-inch tile, with a span of 10 feet. The basement and second stories contain stalls for nearly eight hundred horses. The basement has space besides for boilers, engine and dynamos, and a blacksmith shop, a men's room, toilet and coat rooms, etc. The first story is the wagon room, whence inclines lead to the stalls in basement and second story respectively. In the first story, besides two large wagon washrooms, there is the office of superintendent of the stable, which commands a view of the whole first story and all the entrances, and communicates by electric signals and speaking tubes with seventeen different stations in the building. The second story is taken up with single stalls, each 5 feet wide and 10 feet long. It contains also a small veterinary office and a number of box stalls for sick horses. The third story is for wagon storage,

and contains also a large paint shop, a lunch room for the men, and sleeping rooms and lavatory for eighteen grooms. The fourth story contains a harness repair shop, harness and blanket storage, a 65 by 80 feet hay room, and bins for 20,000 bushels of grain, which is carried to convenient places in basement and second story by means of steel chutes. The building is provided with three steam elevators, the largest having a car 12 by 20 feet. There is an elaborate system of iron sewerage for the stalls, etc., and steel manure chutes which drop their cargoes directly into wagons in the alley.

Carter Building, Boston. C. H. Blackall, architect. The drawings published were prepared for the building now about completed on the block bounded by Devonshire, Water and Washington streets, and Spring Lane. The scale drawings of details, as well as the perspective, were simply studies for the final working drawings, the design being modified slightly in execution. The piers of lower stories are of iron. The entrance portal is of Berea sandstone, with Brescia marble panels let into the tympanum of the arch and the frieze over the doorway. The work above second story is all executed in pale golden buff brick and fire-flashed terra cotta about the color of a slightly browned bread crust. The construction is fireproof throughout, with Z-bar columns and steel framework built into the masonry. The partitions are all of $1\frac{1}{2}$ -inch solid plaster, on expanded metal lath and steel channel framework. The Spring Lane openings are all protected by tinned wooden shutters, to be closed simultaneously by electricity. The roof is made without any pitch, so that it can be flooded with water to overflow on the Spring Lane side, forming a water-curtain in case of fire. This building is the first example of steel skeleton construction to be erected in Boston.

Photogravure Plate: East Entrance to Horticultural Building, World's Columbian Exposition. Jenney & Mundie, architects. Lorado Taft, sculptor. While the Horticultural building has many entrances, this is the only one that is architecturally prominent. Sculptural decoration has here been used to a greater extent than on any of the other buildings, and Mr. Taft's future reputation will rest in no small degree upon this result of his Exposition work. The two large groups stand alone, among the vast quantity of sculpture that has been done on the buildings, as examples of free treatment, untrammelled by the tenets of any conventional school. They were doubtless inspired by a similar treatment that found expression in some of the exterior work on the Grand Opera House at Paris, the excitement about which has long since died away. These were familiar objects to him during his student life. It is a well-known tenet of the sculptor's art that repose is its highest quality. But here we have its very opposite in one group, "The Battle of the Flowers," and its most profound expression in the other, called "Sleep," an emblematic illustration of the well-known fact that trees and plants rest during the hours of the night. There would be no excuse for producing the group called the "Battle" unless accompanied by its counterfoil "Sleep," which justifies any violation of the leading canon of the sculptor's art. These groups were originally modeled so small that they could be lifted in one hand, and were successively enlarged as the details of the sculptor's work grew in his mind. At last the colossal groups that we now see were "built up" from a much smaller model, and the process of design and improvement were carried on to the very end, many additions and changes being made after they were placed in position. No groups were ever more truly designed for the places they occupy than these, and it is safe to say that no sculptor ever before acted in greater harmony with an architect. The same may be said of all the other sculpture seen in our photogravure, much of which, however, is not shown clearly enough to be described in detail. This entrance is an epitome of the architecture of the whole building, and the best illustration on the grounds of the fact that architecture and sculpture may be one art. What the fate of this beautiful entrance will be is still an uncertainty. To divorce Mr. Taft's work from its setting would destroy half of its effectiveness, and it will be a sad day for art if this entrance-arch is ever destroyed, unless to be replaced by one of more permanent materials.

PHOTOGRAVURE PLATES.

Published only with the Photogravure edition.

The architect of the German building at the World's Fair, photogravures of which appeared in July issue, credited to Mr. Hoffaker, was Johannes Radka, of Berlin.

North Wing and Central Pavilion of Japanese Palace on the Wooded Island, World's Columbian Exposition. M. Kuru, architect to the Imperial Japanese Commission. We have heretofore published all the working drawings of this interesting illustration of the old architecture of Japan, together with a full description. These photogravures will serve to verify what we have already said at considerable length. (See articles and illustrations in December, 1892, and January, 1893.)

South Entrance to Electricity Building, World's Columbian Exposition. Van Brunt & Howe, architects. This picture shows with best effect the most prominent feature of the Electricity building. It is the only one of the larger Exposition buildings that does not depend upon figure sculpture for any of its architectural effects. The sole work of that nature about it is the colossal statue of Franklin, standing under the semi-dome of the main entrance, and shown in our photogravure. And large as it may be, it is still out of proportion to the size of the entrance, and the building may be said to be entirely independent of it. There is some very effective coloring in the dome and loggias of the south front, without any attempt at pictorial work, as in other buildings on the grand court. The design over this entrance seems to have

been cut off abruptly at the extreme top, leaving one in doubt as to whether the intention was to carry it up higher or to surmount the whole with groups of sculpture. But even considering this, the entrance is more imposing than that of any of the other main buildings, though much of the effect was spoiled by placing a band-stand so near to it.

Van Houten Chocolate Refectory, World's Columbian Exposition. P. S. Weber, architect. This curious specimen of the domestic architecture of Holland is located on the lake front at the northeast corner of the Manufactures building. The exterior is mostly covered with staff and painted to imitate red brick, stone and wood. In some places it is inlaid with Dutch tiles, and in others it is painted to imitate tiles. It is roofed with purple slates laid in the Dutch manner. However imitative the exterior may be, the interior is built throughout in exact imitation of the old buildings of that country. One room is entirely lined with Delft tiles, and some of the doors and fittings were brought from old buildings.

Ohio State Building, World's Columbian Exposition. J. W. McLaughlin, architect. This building is located fronting the North pond, near the west entrance to the Art Palace. The exterior is entirely covered with staff, and the roof is of Ohio red tiles. The design is to illustrate the, not colonial, but still early architecture of the Ohio Valley, and was suggested by that of the old Longworth House in Cincinnati. Some think that it is a copy of the White House at Washington, because it has a semi circular portico in front. It is also seen to good advantage from the bridge which spans the neck of water between the North pond and the Lagoon.

East India Pavilion, World's Columbian Exposition. Henry Ives Cobb, architect. Some publications have complimented Mr. Cobb by saying that this design that came from India was executed in staff by Chicago contractors, and it is not generally known that it is the work of a Chicago architect. In fact, it is much more correct than any of the oriental buildings that were designed and built by the Orientals themselves, and shows that after all professional architects are best versed even in styles that they have practiced but little. This is not a national building, but is a concession, and the credit is due to the enterprise of a Hungarian merchant who resides in Delhi, India, under the sway of the British Empire. It is well executed, and its best effects are produced by the skillful and correct decoration of the exterior in colors and gold and silver leaf.

Massachusetts State Building, World's Columbian Exposition. Peabody & Stearns, architects. Of all the reproductive buildings in Jackson Park this is the best. As is well known, it is a correct rendition of the old Hancock House at Boston, which was destroyed a few years ago to make place for a business structure. Fortunately, the building was carefully measured, and drawings were made of it before it was taken down, so that it was not difficult to erect a facsimile. As far as the woodwork is concerned this was done, and the rest was executed in staff. In seeing that the spirit of the old building was correctly preserved, the greatest credit is due to Charles H. Frost, of Chicago, himself a Bostonian, who was familiar with the original, under whose direction it was erected.

NEW PUBLICATIONS.

HANDBOOK OF ORNAMENT, A GRAMMAR OF ART INDUSTRIAL AND ARCHITECTURAL DESIGNING. By Franz Sales Meyer, professor of the School of Industrial Art in Karlsruhe. Hessler & Spelmeyer, publishers, Berlin and New York. Inland Publishing Company, Chicago. Retail price \$3.60.

This volume, of 580 pages, is a reissue in book form of the author's collection of examples published in folio size under the title "Ornamentale Formenlehre." The plates on a large scale were found to be too expensive and cumbersome for ordinary readers, and have accordingly been reduced and printed with the explanatory text in convenient and popular form. The work is illustrated with 300 full-page plates, all of which are described in the text. To say that it is of general utility to all students of art and ornamentation is but faint praise. The whole domain of ornamental art is presented by the author on the synthetic plan, i. e., the constructive rather than the analytic. Division I treats of the "Bases of Ornament," the motives of which it treats. Geometrical motives are those formed by the regular section of lines and angles; natural motives are those taken from the vegetable and animal kingdoms; artistic motives, the forms borrowed from art, chiefly emblems and trophies. Division II arranges the various forms according to their functions. Division III shows the application of the ornament to ceramics, utensils, furniture, etc. The illustrations fully represent the styles of various nations and periods. The first rude forms of ornamental art were of the geometric order. Lines, angles and circles, though of a more conventional form than the objects of nature, are more easily combined for purposes of ornamentation. The use of natural forms was a later growth. Two distinct methods of treatment are here observable—the realistic and the idealistic. In the former, the plant, leaf, etc., is represented as it is; in the latter, as it is supposed to be. By this latter process of idealization natural forms are often transformed into unrecognizability. The beginnings of all art are naturally along the easiest lines. Thus in the adoption of plant life patterns the acanthus leaf is first selected because its lines border most closely on the geometrical. So in the selection of animals, those which are the easiest available are chosen even to the exclusion of others more familiar. The lion is a favorite, because his striking attitudes are easily delineated.

The triumph of modern art is in adaptation. There is little new in forms, but their application to the uses of ornamentation is a study for the centuries, and though we can hardly expect to originate at this late day, yet we do excel in application of the ancient forms to modern uses. This work has been adopted as a text-book by the Pratt Institute of Brooklyn, New York.

"ORNAMENTAL IRON"; Photogravure Edition, 1893. The Winslow Bros. Company, Chicago.

The multiform use of ornamental iron in architectural work now calls for the best equipment of machinery and the highest artistic skill. On the other hand, the development and application of important new processes and finishes has created a wider and higher demand for ironwork in the best buildings. Rapid progress in developing original designs and new ideas in construction and finish has done much to popularize the use of metal work in architecture. Possibilities which formerly were only hinted at have now become actualities. The cold and unyielding metal has been molded by the genius of the artisan into a vision of beauty, strength and permanency. "Ornamental Iron" contains 141 full-page photogravure plates illustrating the work of the Winslow Bros. Company. Twenty-three plates are devoted to stairways and balconies; seventeen to railings; twenty-nine to elevator enclosures; two plates show twelve designs of elevator cabs; two show eighteen designs of panels, medallions, etc., in galvanoplastic; and the remaining sixty-eight plates are devoted to counter railings, entrances, canopies, grilles, lamps, frames, brackets, screens, fire-dogs, doors, knockers, kettle stands, sky-lights, etc. A lithographed edition also is published, containing eighty-three plates, 11 by 14 inches in size and showing over four hundred designs. The varieties of finish represented are numerous. There are bower-barff, bronze-metal, electro-bronze, aluminium, nickel-plate, electro-deposited copper-bronze on hardwood, common wrought iron, triple-plated statuary-bronze finish, bronze inlaid with mosaic, galvano-bronze and galvanoplastic bronze. In these combinations are formed the many patterns of wonderful beauty for which the Winslow Bros. Company are noted. The styles shown are invariably elegant. A grille in modern Rococo and one after the Renaissance are both handsome features. Plate 115 shows two Rococo grilles, and Plate 116, a Gothic and an early German grille. Plate 117 shows a grille in pure Renaissance. All these are interesting examples of the styles named. One cannot fail to notice the uniformity of the electro-bronze and the bower-barff finish. Where one is not specified the other usually is, and often both are employed in the same work. The scarcity of aluminium is noticeable. Predictions have been freely made as to the use of this metal in architectural work, but as yet they have not been verified to any considerable extent. It is scarcely as economical as the other metals and in finish it is somewhat disappointing.

THE AWARD OF DIPLOMAS TO ARCHITECTS.

IN making the awards of medals and diplomas to architects and sculptors, the international board of judges were careful and discriminating, the work of the board being singularly difficult, because of the multiplicity of good designing that the Columbian Exposition presented for their judgment. It will be interesting, therefore, to learn the general opinion of the judges, through a letter received from W. Kyllmann, by Mr. D. H. Burnham, Director of Works, which accompanied a medal and diploma. The letter is as follows:

MR. BURNHAM.—My international colleagues, members of the board which have been appointed to pass judgment upon the merits of the architectural works exhibited at the World's Columbian Exposition, have honored me by offering me the chair of their worthy body, the greatest honor, perhaps, that has ever been allotted me during my entire lifetime. For it is my firm belief that there is hardly a branch of this jury of awards the importance of which is equal to that of the department which has had the distinction of being intrusted with examining the products which to the World's Columbian Exposition of 1893 have given its peculiar stamp, whereby it is distinguished from all former world's expositions—I refer to its grand, noble, magnificent, majestic architecture, so characteristic and typical of American art at the close of this present century. We European architects came here with high expectations, expectations which, nevertheless, are vastly surpassed and outdone by what has presented itself here before our very eyes. Neither the days of antiquity, nor modern times, have witnessed a work of such architectural grandeur. The mighty rulers of Assyria or Egypt, the Emperors of Byzantium or Rome, Charlemagne or Emperor Napoleon have in vain endeavored to enhance their fame by architectural monuments of such beauty, boldness and dimensions, grouped in the most wonderful combinations, as those that are here today liberally offered to the American people and its hosts of guests. Permit me, dear Mr. Burnham, to tender you, as well as your colleagues, to whose genius, admirable endurance, and enviable coöperation we are indebted for this triumph of architecture, our most sincere and collegial congratulations. Aside from the medals we have adjudicated to the various buildings and their genial authors, hailing from all the civilized countries of the world, we beg to be permitted to confer the same distinction upon the artist who has been at the head of the entire work at Jackson Park, and to whom is due such an eminent share in the success of the glorious enterprise.

(Signed)

W. KYLLMANN,
KGL. BAURAT,
Berlin.

MOSAICS.

THE report of awards by the Jury for Fine Arts includes in Architecture: Brunner & Tyron, Cope & Stewardson, R. W. Gibson, H. J. Hardenburg, R. M. Hunt, Lamb & Rich, Longfellow, Alden & Harlow, Peabody & Stearns, Shepley, Rutan & Coolidge, Edmund March Wheelwright, William Halsey Wood. In Sculpture the awards are: John Donohue, Charles Grafly, Henry H. Kitson, Thomas Ball, Robert P. Brinhurst, Herbert Adams, C. E. Dallin, C. H. Niehaus, John Rogers, Emil H. Wuerz, F. Wellington Ruckstuhl, F. Edwin Elwell, J. J. Boyle, Edward Kemeys.

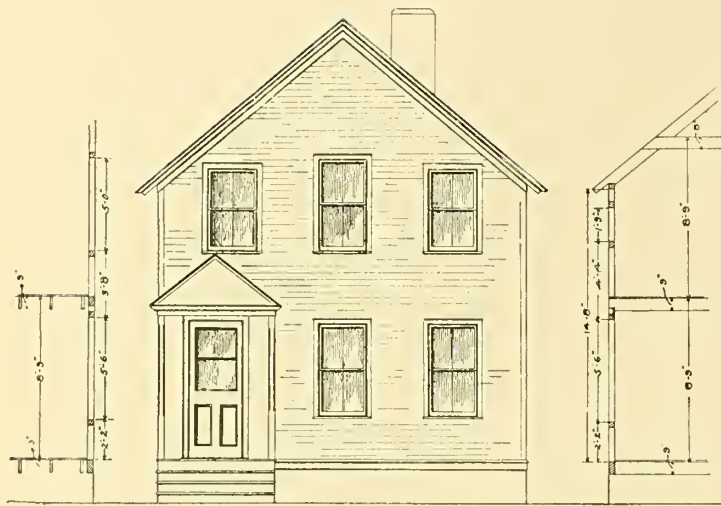


INLAND ARCHITECT PRESS.

EAST ENTRANCE TO HORTICULTURAL BUILDING, WORLD'S COLUMBIAN EXPOSITION, CHICAGO.

JENNEY & MUNDIE, ARCHITECTS.

Lorado Taft, Sculptor.

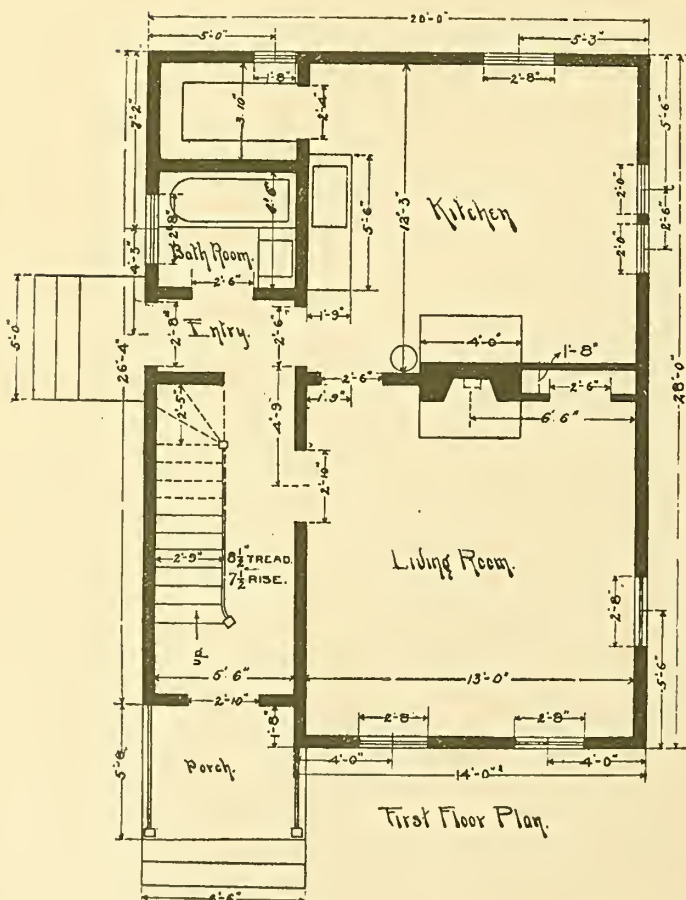


FRONT ELEVATION

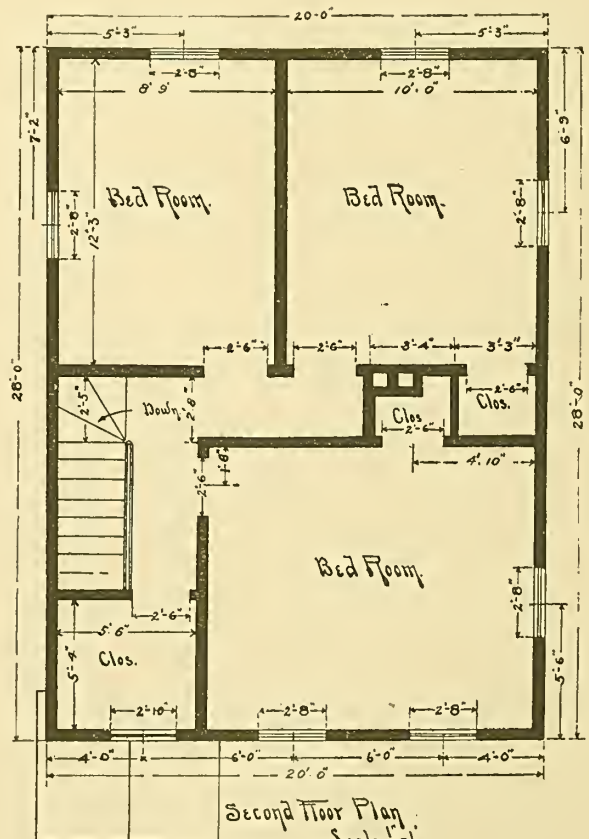


LEFT SIDE ELEVATION

SCALE $\frac{1}{8}$ "=1'



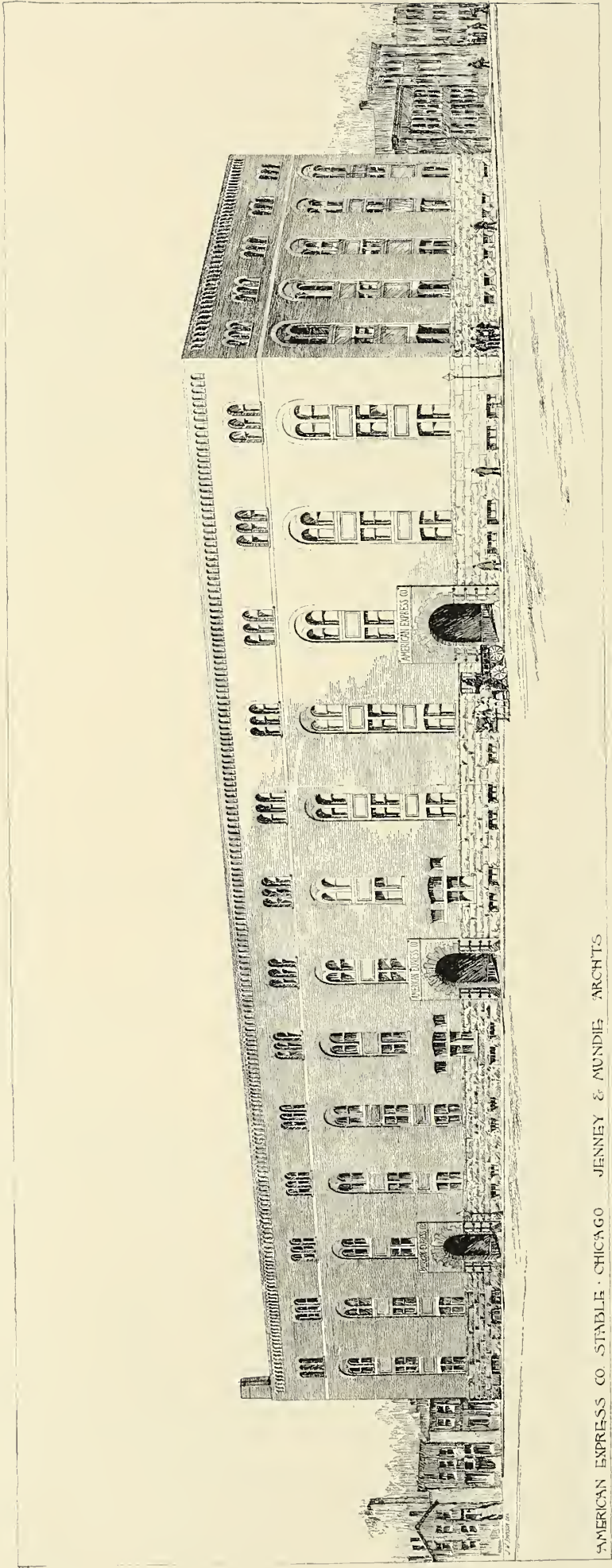
First Floor Plan.



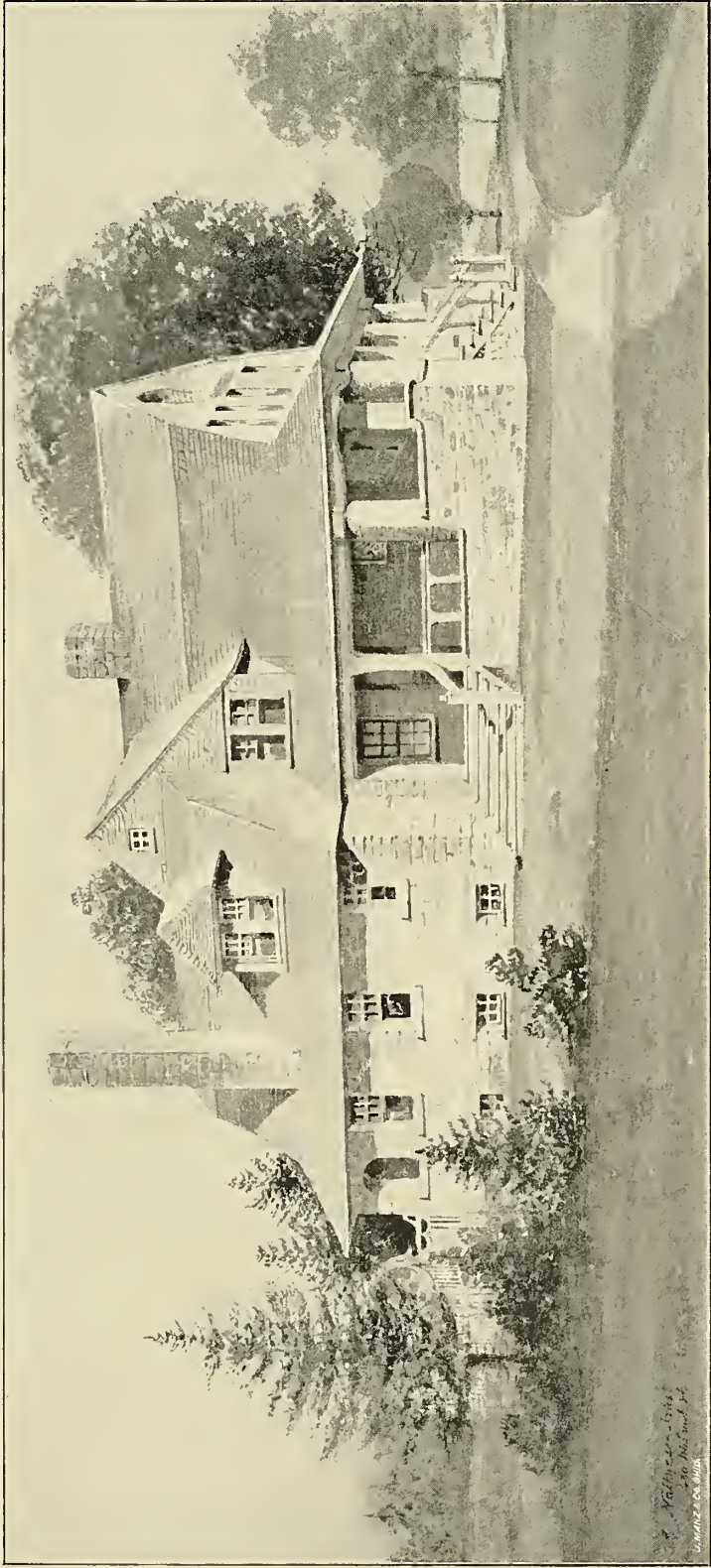
Second Floor Plan.
Scale $\frac{1}{8}$ "=1'

NEW YORK WORKINGMAN'S HOUSE.

ILLUSTRATING ARTICLE "WORKINGMEN'S MODEL HOMES," BY P. B. WIGHT, ARCHITECT.

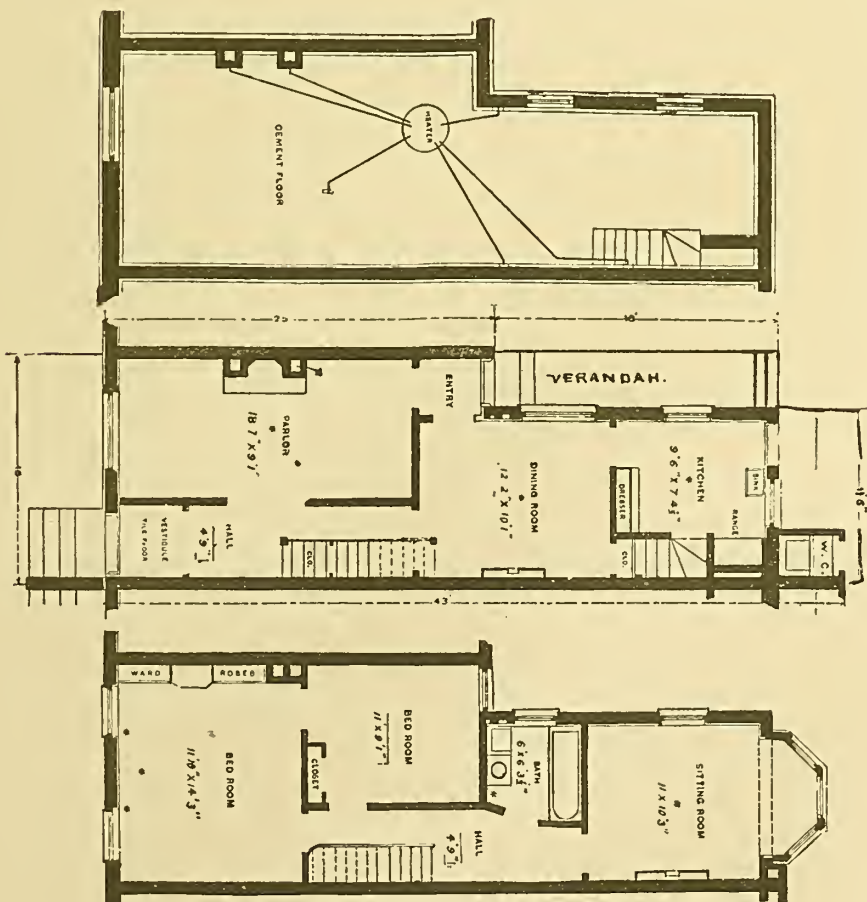
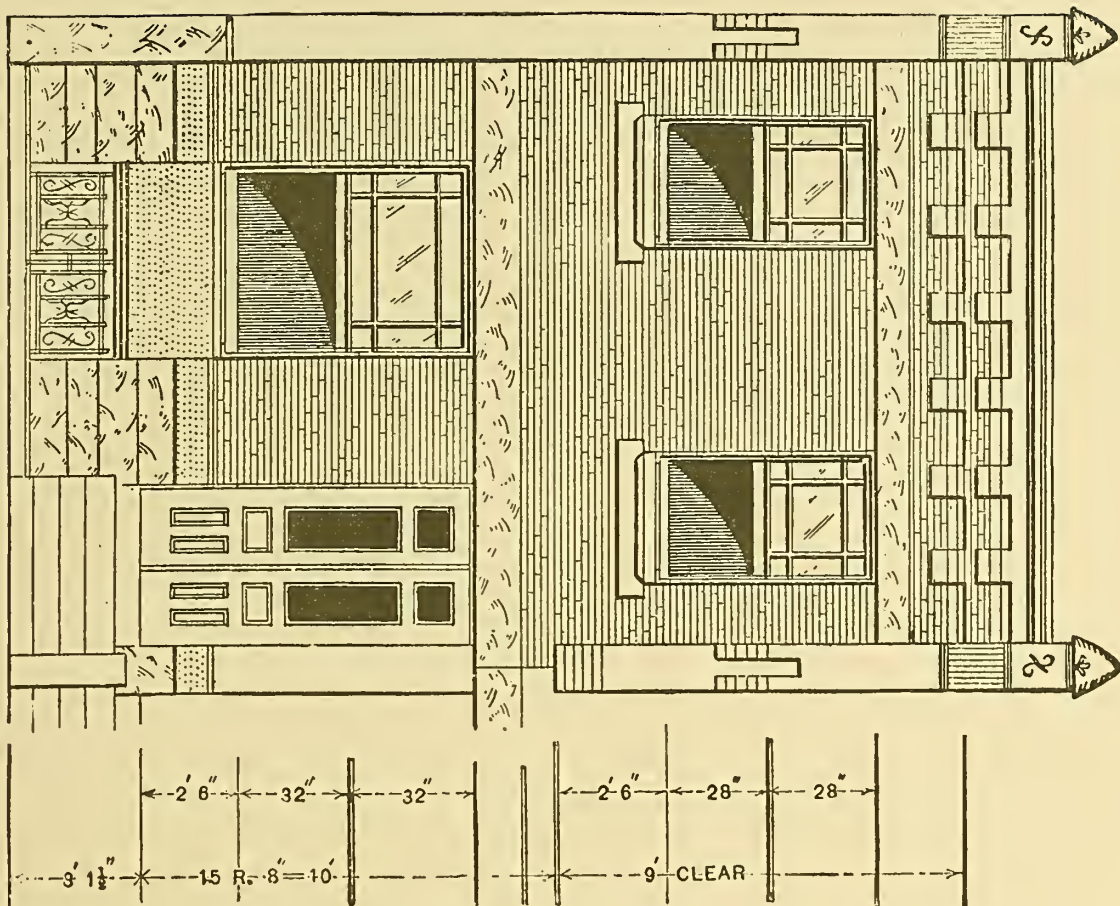


AMERICAN EXPRESS CO. STABLE, CHICAGO. JENNEY & MUNDIE, ARCHTS.



COTTAGE OF FRANK E. RICHMOND.

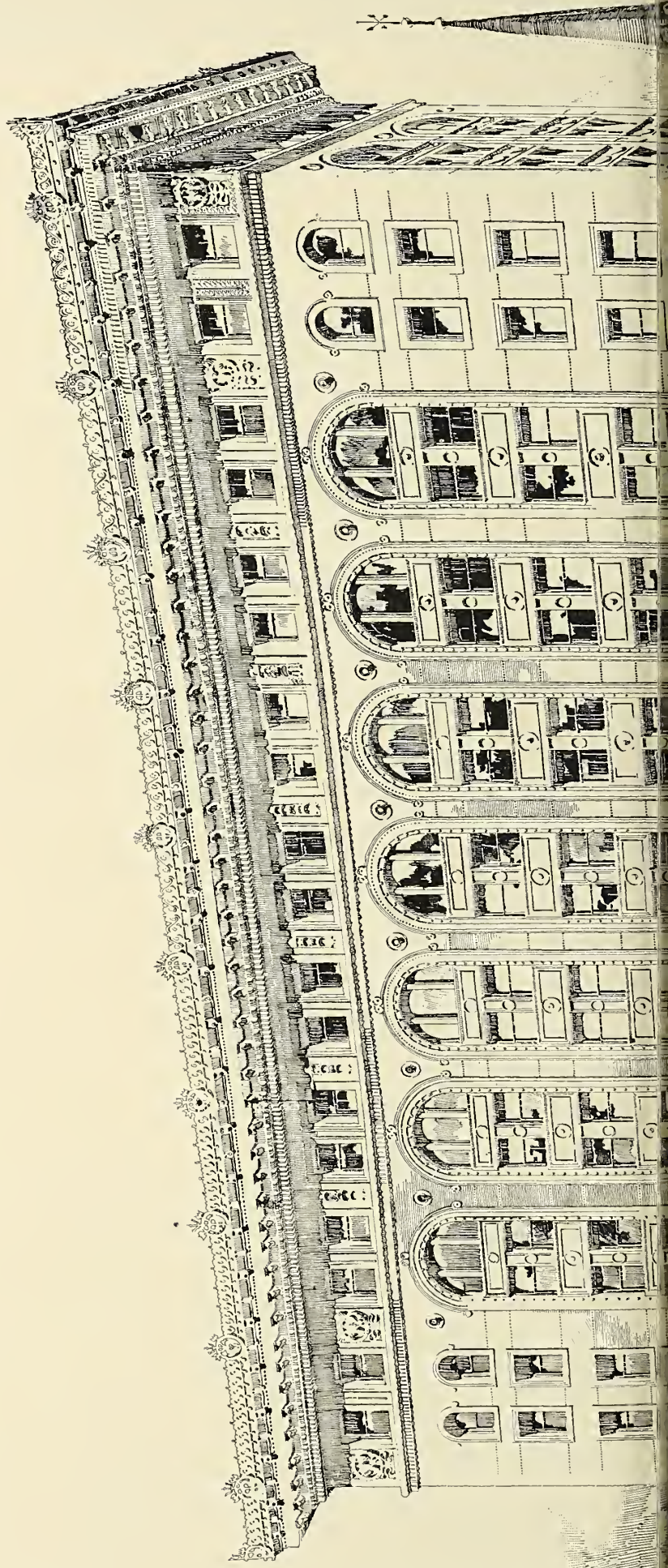
STONE, CARPENTER & WILSON, Architects, Providence, Rhode Island.

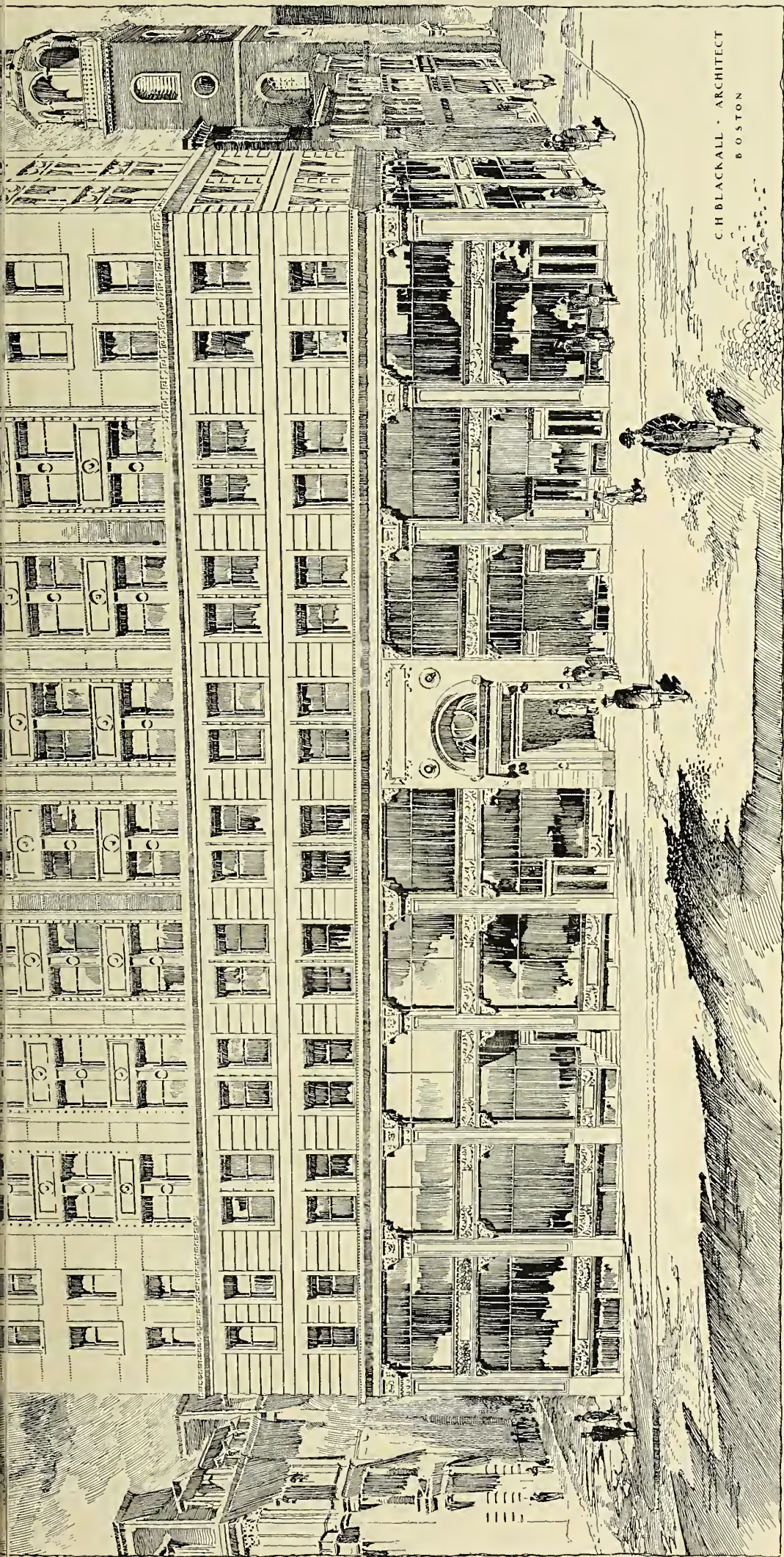


PHILADELPHIA WORKINGMAN'S HOUSE, WORLD'S COLUMBIAN EXPOSITION, CHICAGO.

ILLUSTRATING ARTICLE "WORKINGMEN'S MODEL HOMES," BY P. B. WIGHT, ARCHITECT.

OFFICE BUILDING
CORNER WASHINGTON AND WATER STREETS
B O S T O N



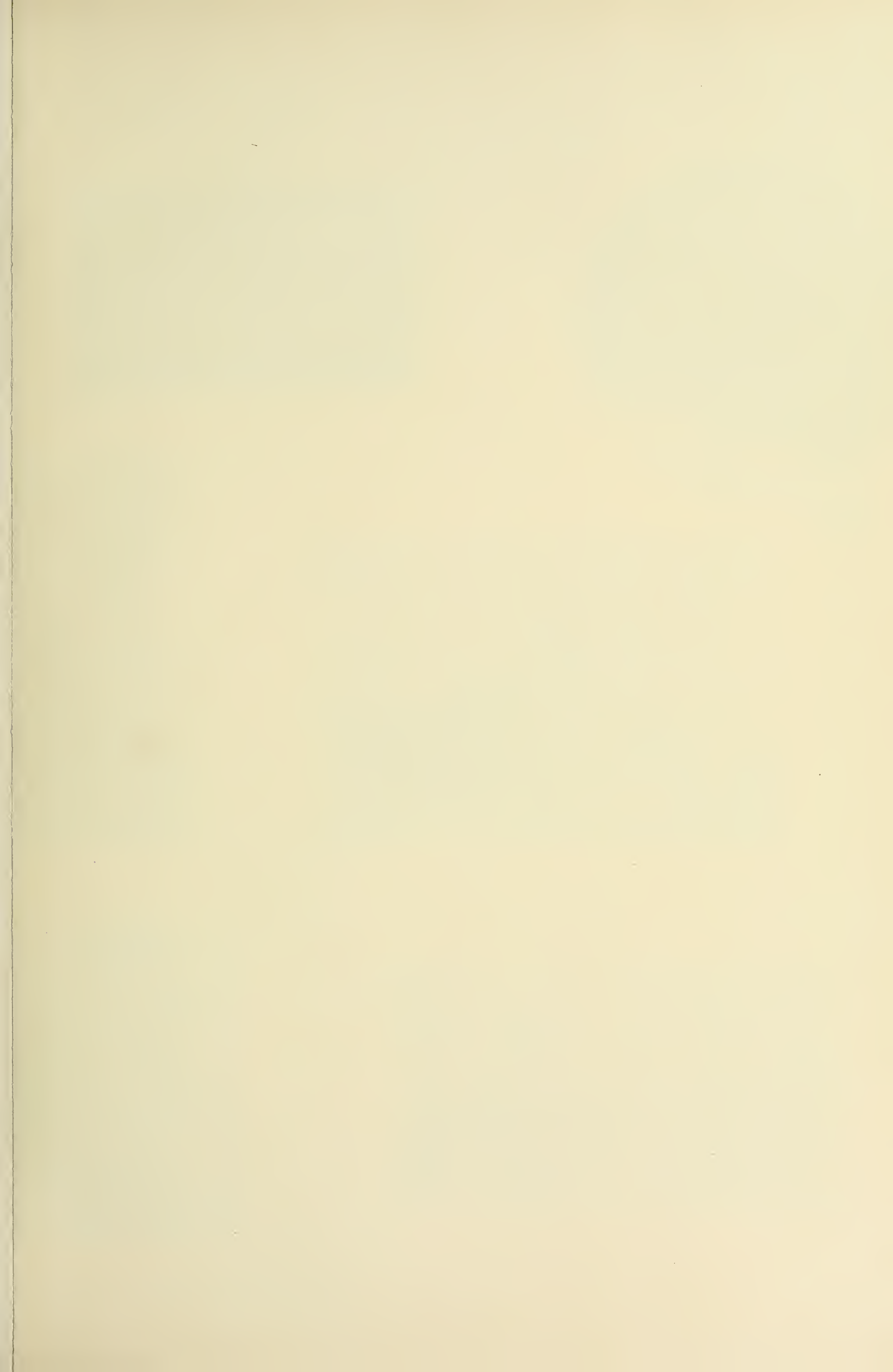


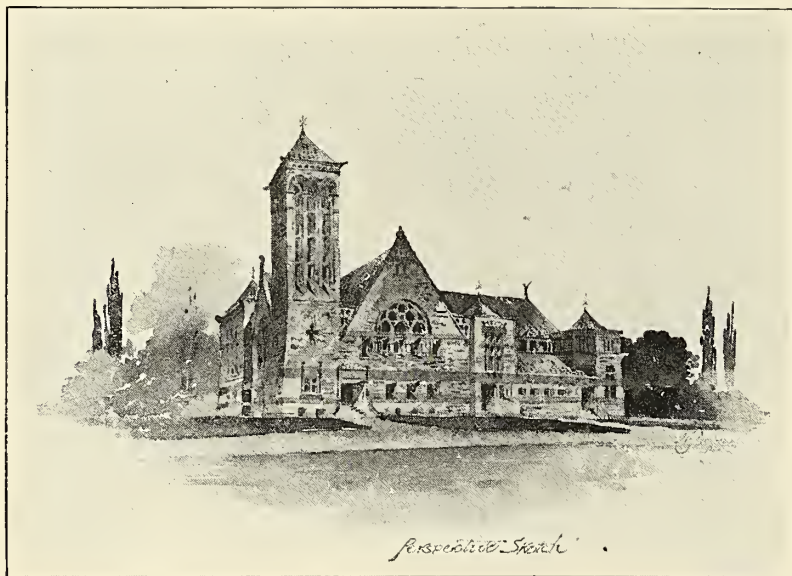
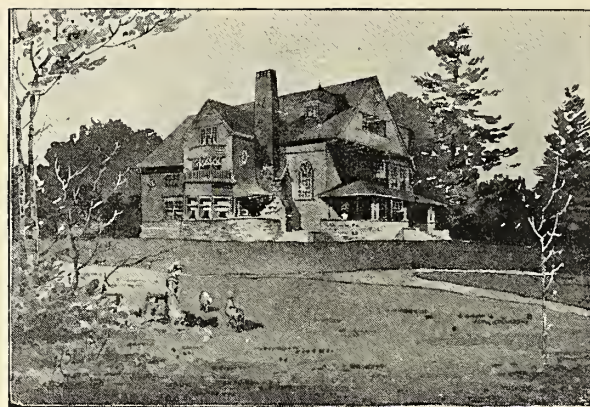
OFFICE BUILDING

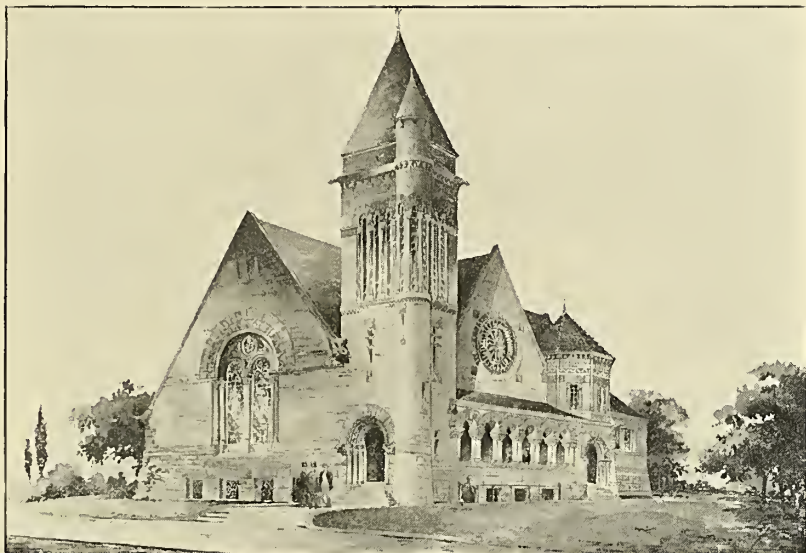
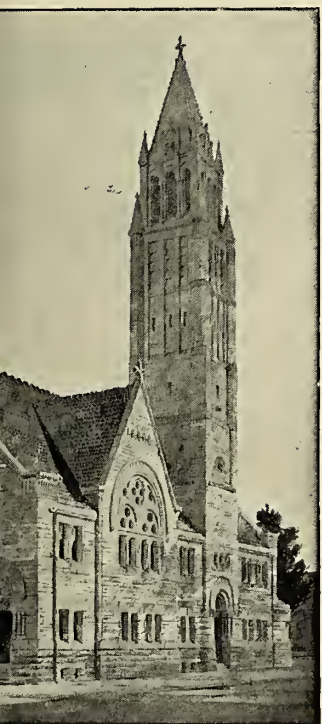
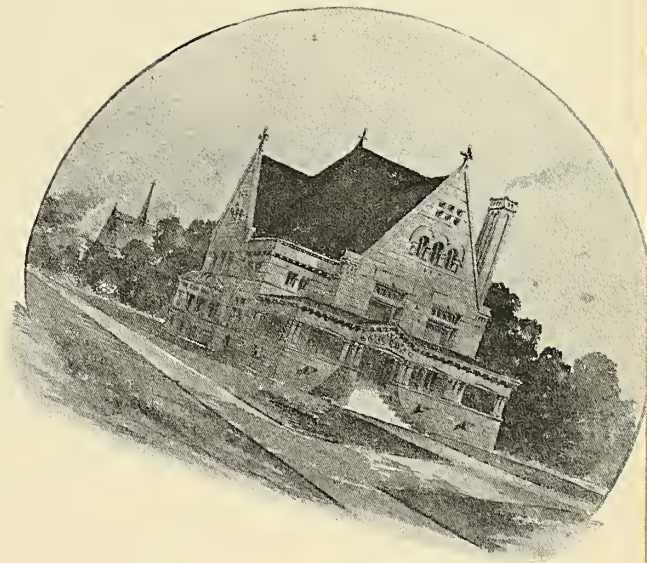
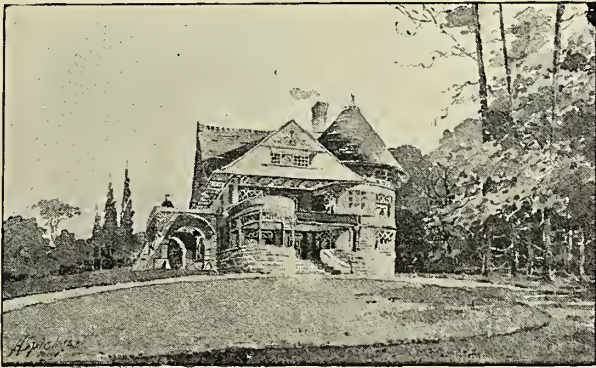
CORNER WASHINGTON AND WATER STREETS

B O S T O N





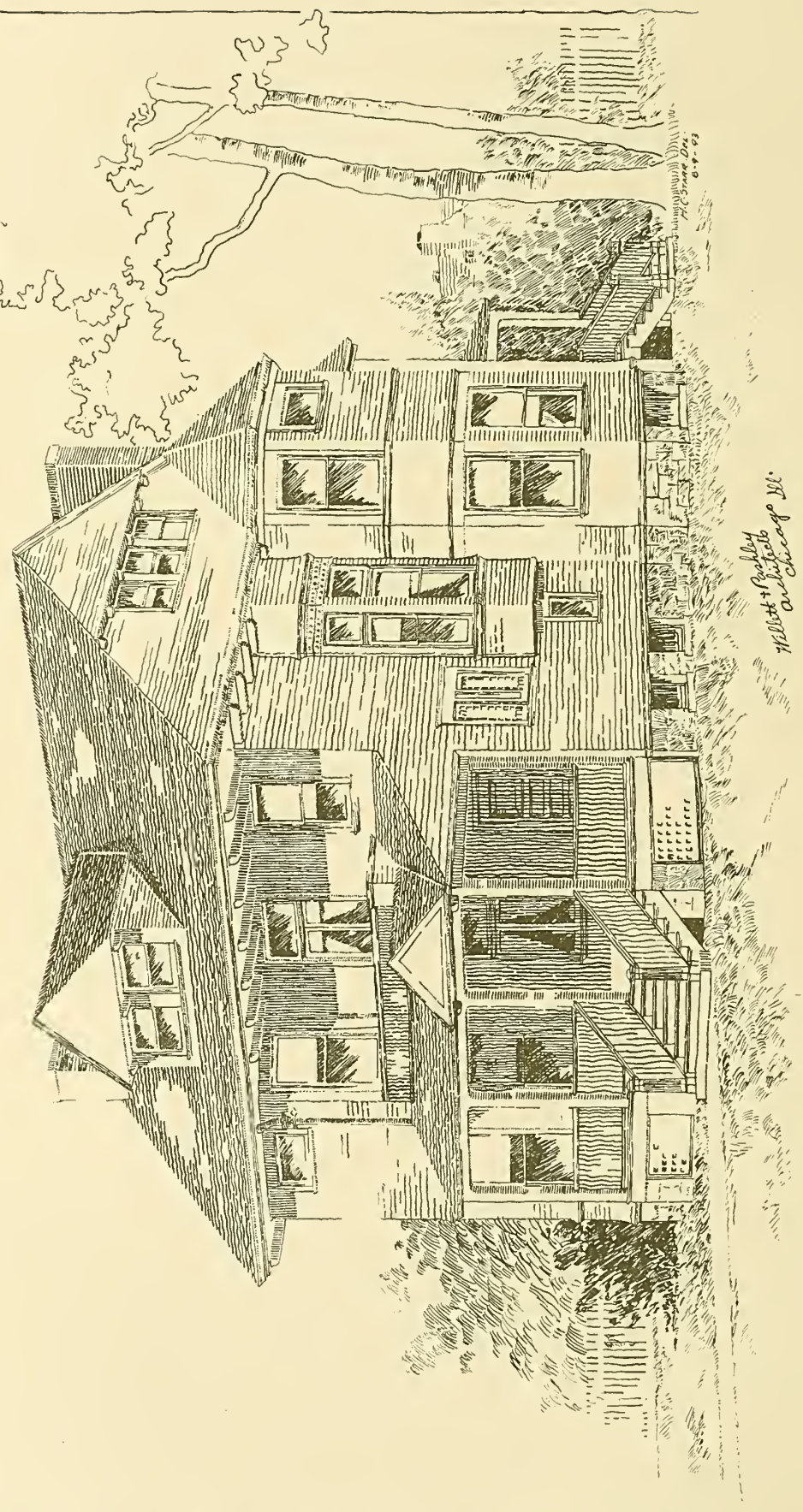




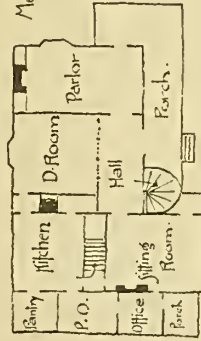


SOME RECENT WORK BY YOST & PACKARD, ARCHITECTS, COLUMBUS, OHIO.

RESIDENCE OF MR. FRANK HAMILTON
MOMENCE ILL.

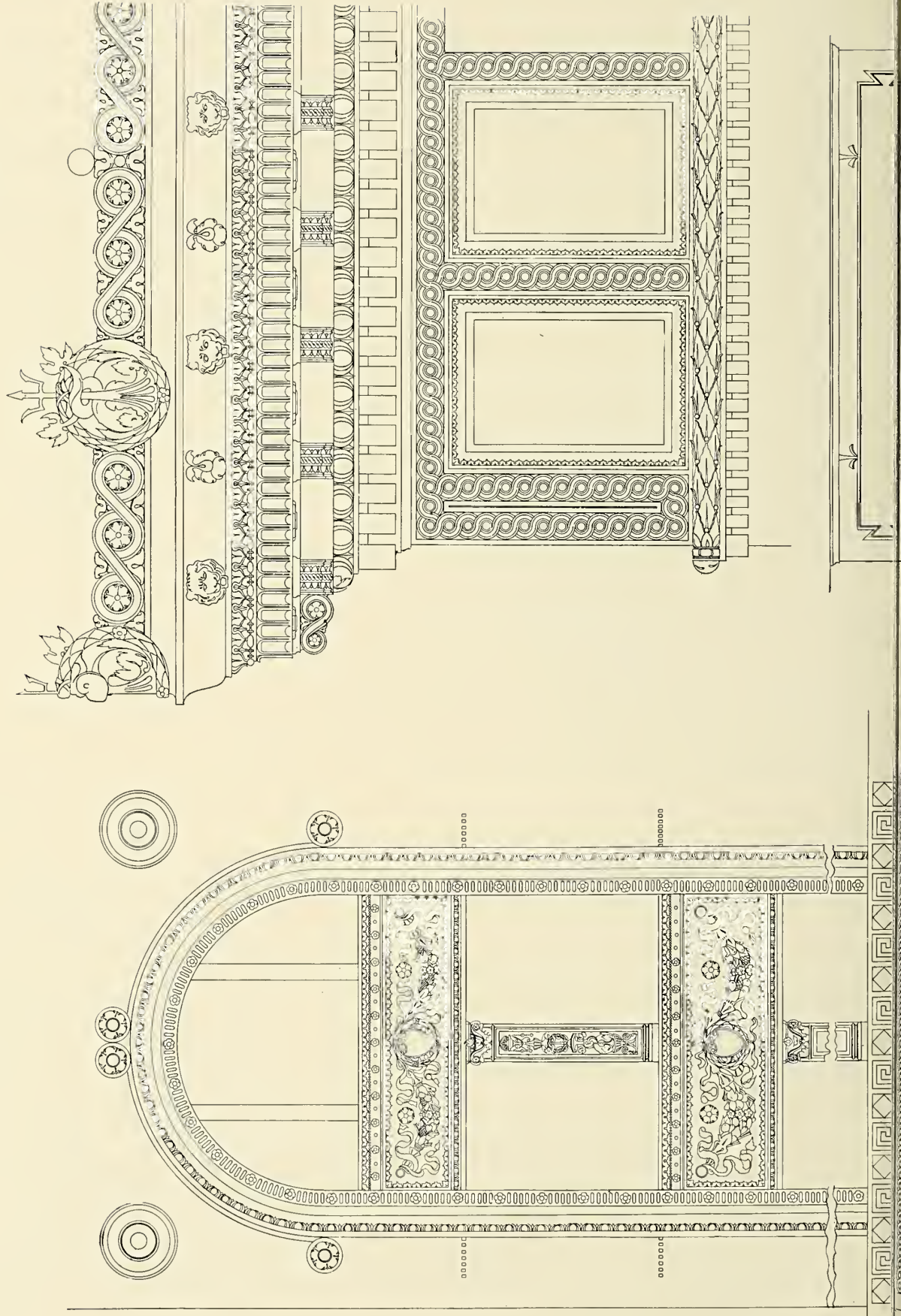


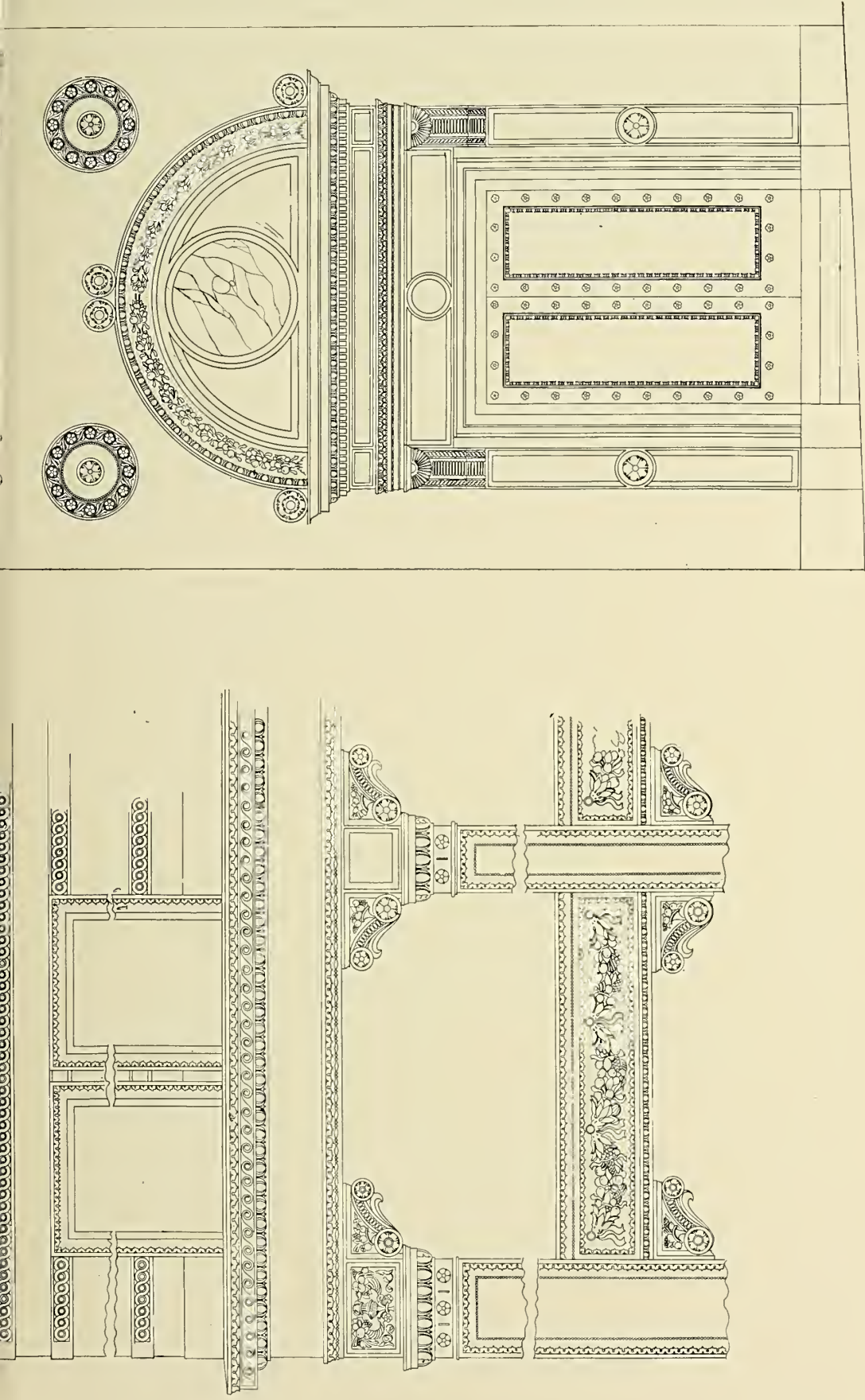
Memory Plan



DR. WHITNEY'S HOUSE • 16TH AND
DOWNING AVE. • DENVER • COLO.
SKETCHED BY W. COWIE.

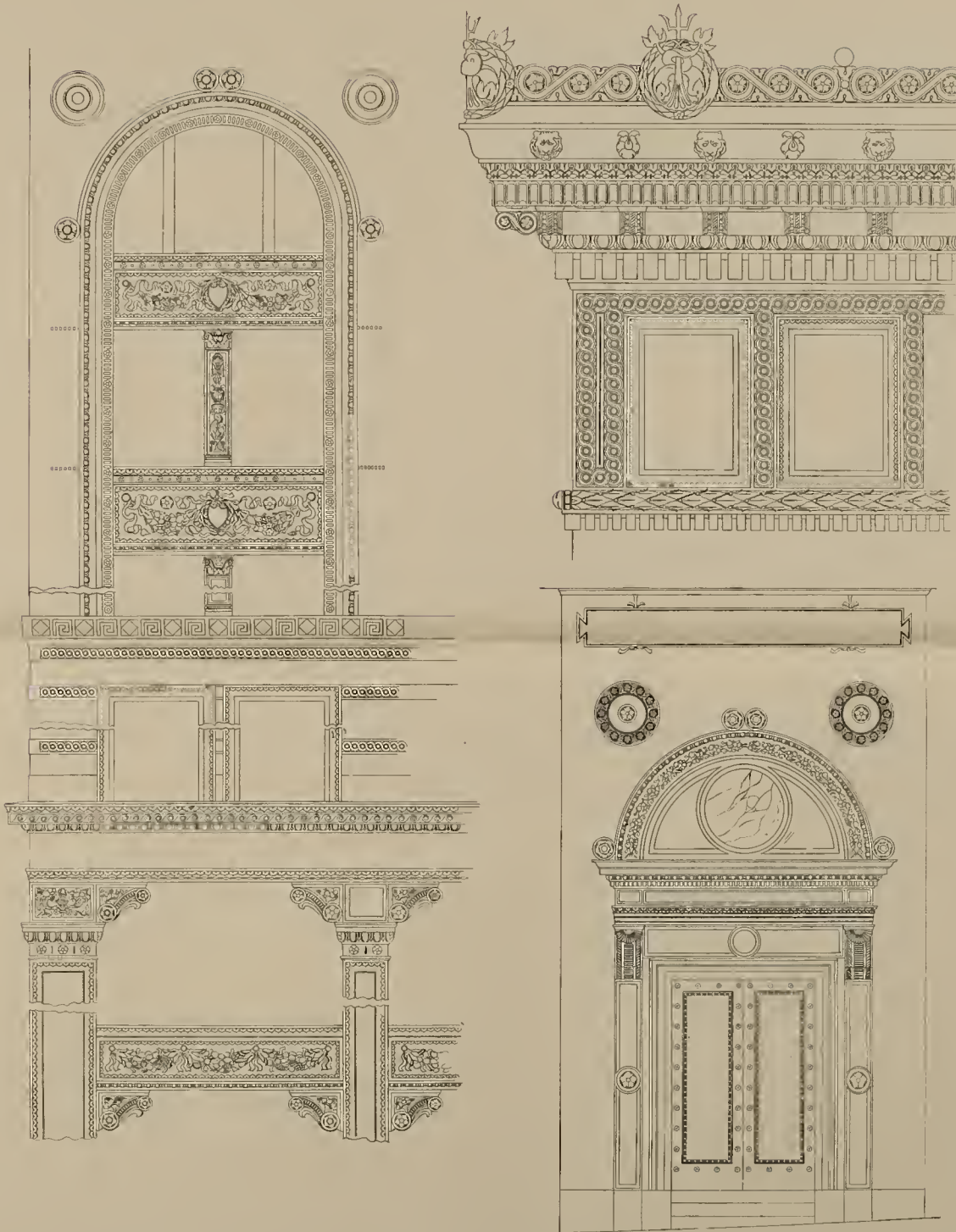






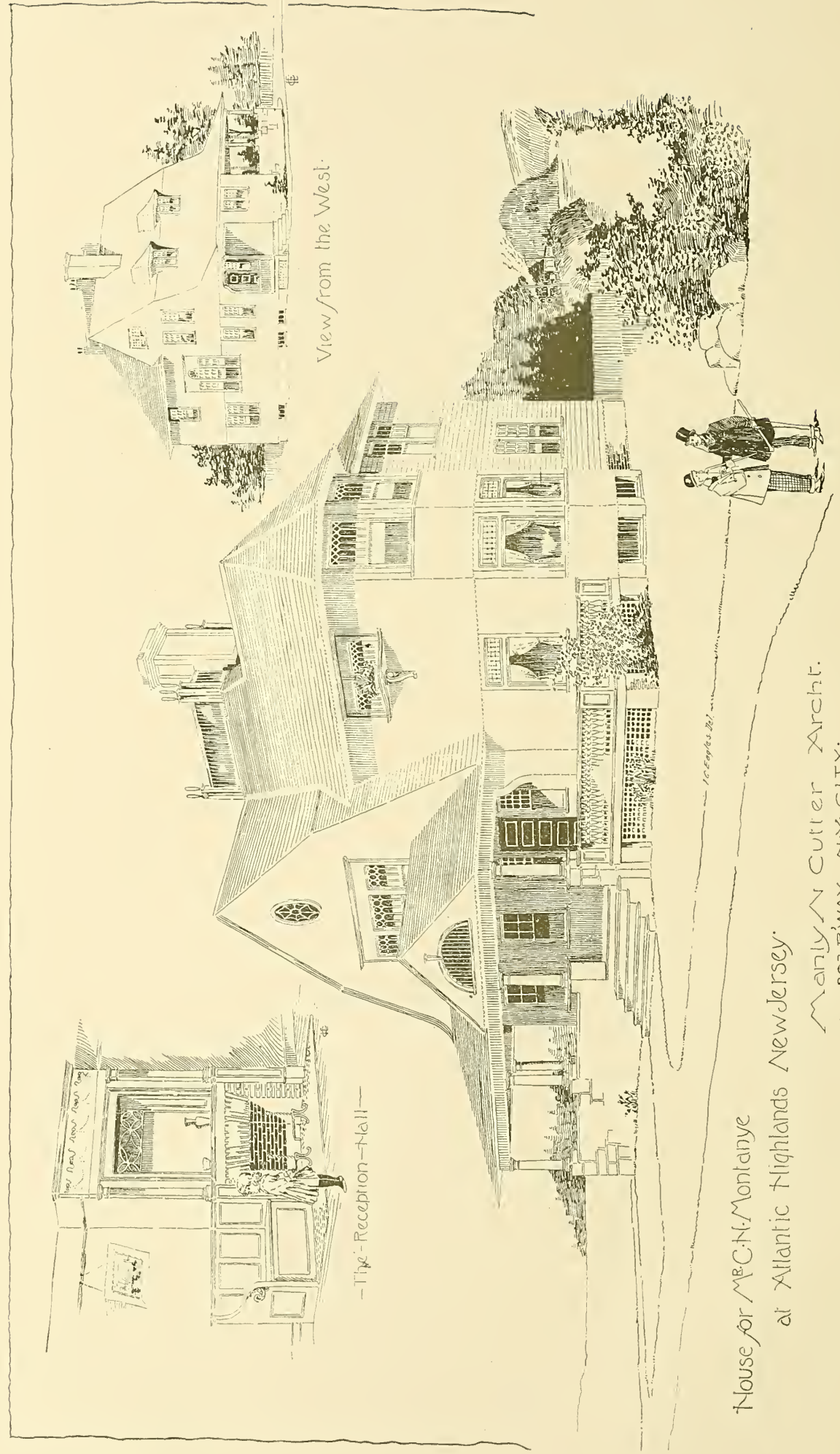
DETAILS OF OFFICE BUILDING, CORNER WASHINGTON AND WATER STREETS, BOSTON.

C. H. BLACKALL, Architect.



DETAILS OF OFFICE BUILDING, CORNER WASHINGTON AND WATER STREETS, BOSTON.

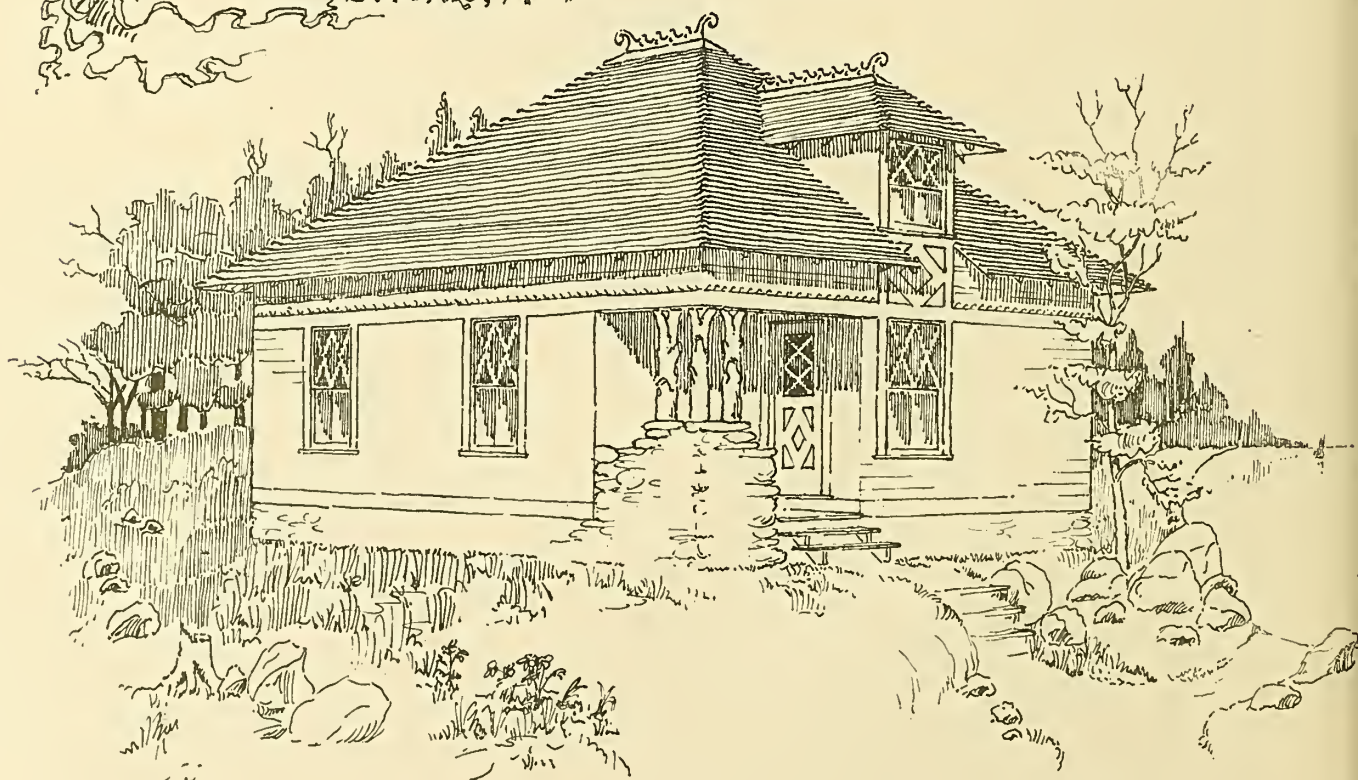
C. H. BLACKALL, Architect.

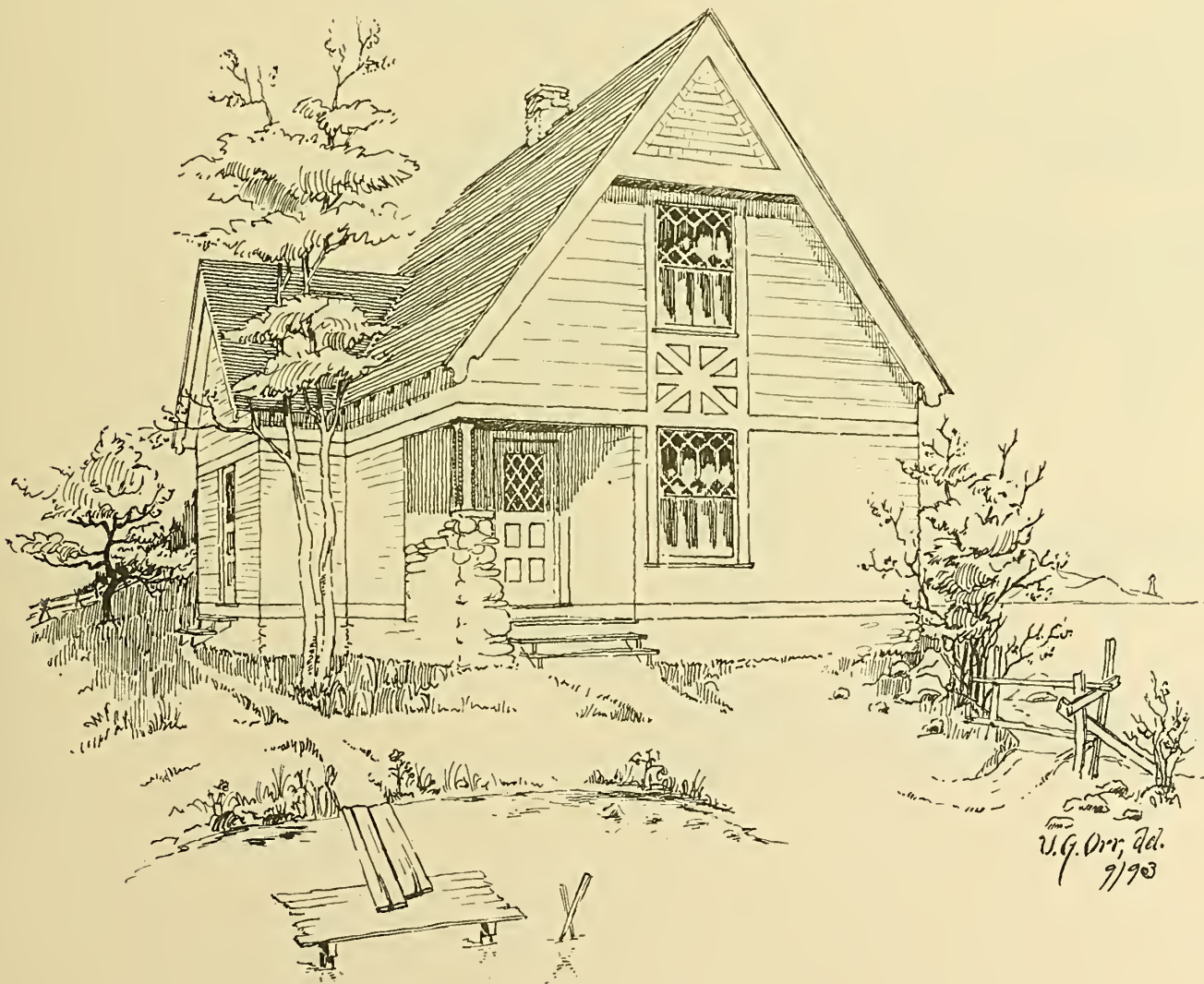
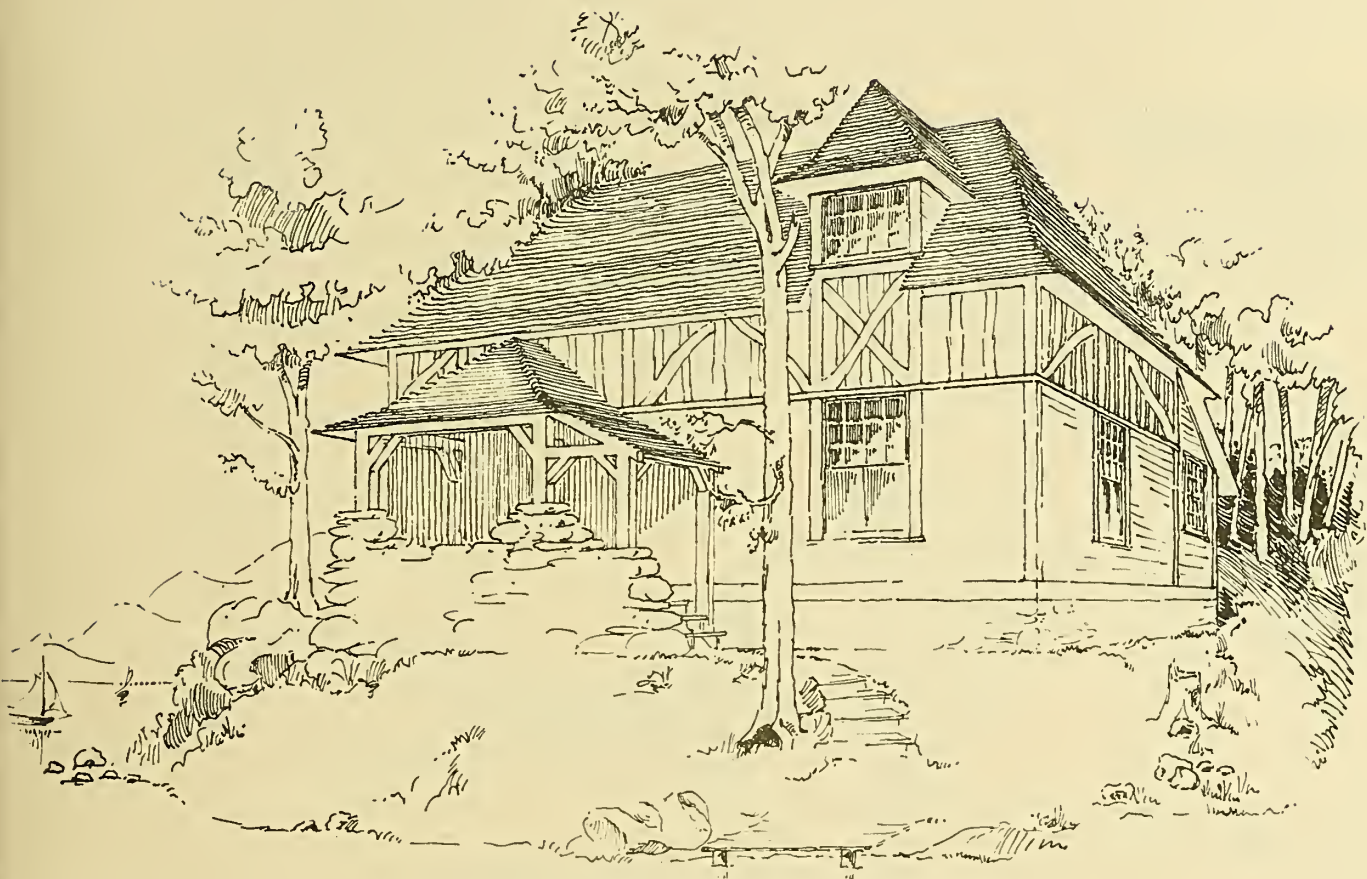


House for M^{rs} C. N. Montanye
at Atlantic Highlands New Jersey.
Manly N. Cutter Archt.
203 B'way N.Y. City.



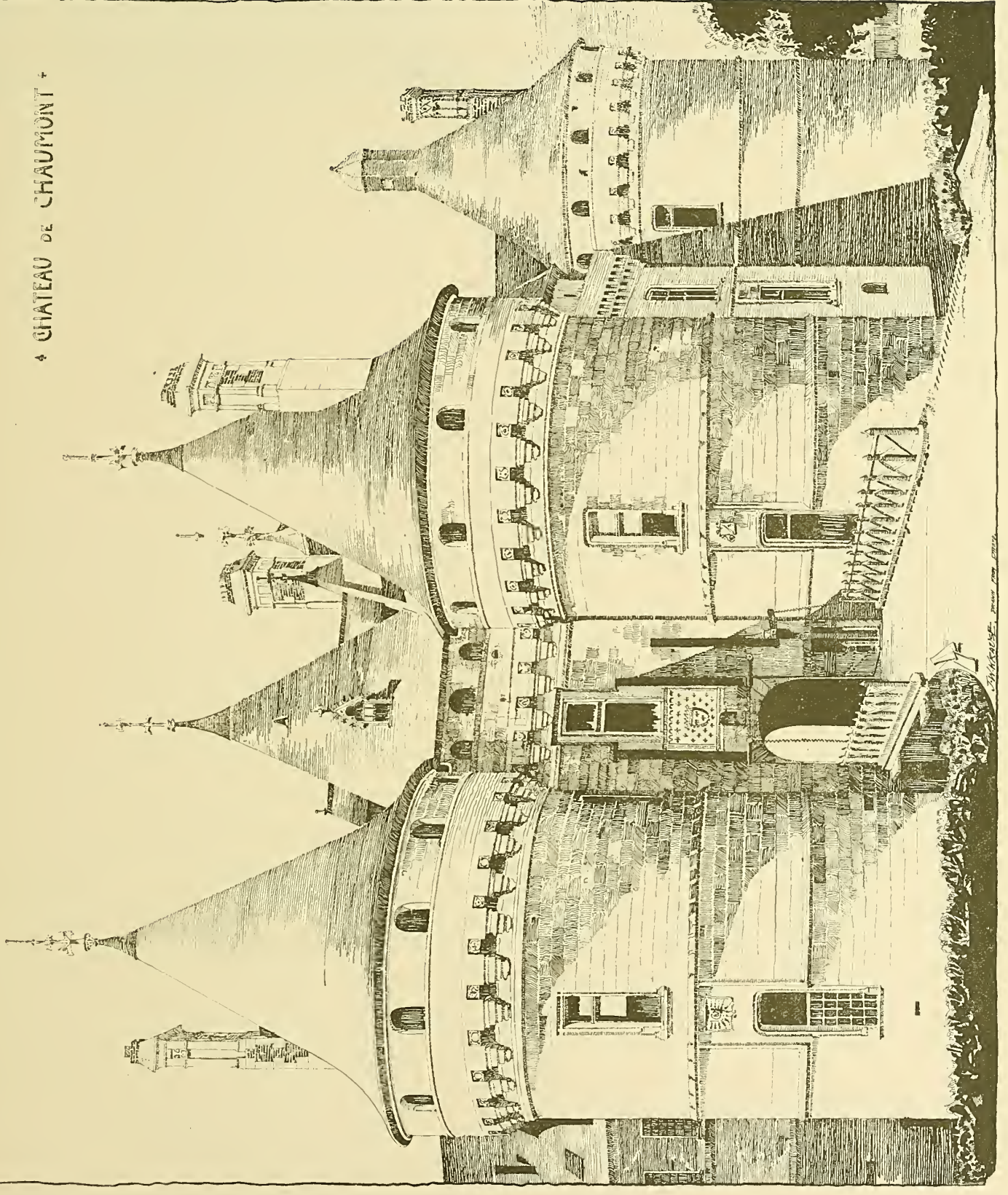
LAKE SHORE COTTAGES
FOR MR. A. P. HAYES.
ATHOL SPRINGS, N. Y.
U. S. V. S. S. E. S. G. O. R. R.
ARCHITECT,
31 BUILDERS' EXCHANGE,
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The Bill to Reorganize Government Architecture. When congress meets in December, a strong effort should be made by the profession to secure the passage of the bill for the reorganization of the government architectural service. It will be remembered that at the last session but one the bill passed the house and was not reached by the senate prior to adjournment. It had received the unanimous indorsement of the House Committee on Buildings and Grounds, and seemed to meet the general approval of legislators. The same bill should be taken up by the officers and directors of the Institute, and as far as possible the members of the former committee should be added, and a hearing secured before the house committee at an early day. It is probable that the session will be loaded down with the tariff bill and other measures, and plans should be completed for the introduction of the bill before congress convenes. While the experience of the past ten years, from the Stockslager bill down, have not been on the whole encouraging, the frequent introduction of bills has caused legislators to think upon the subject and taught architects the character of bill that is liable to pass, and the proper method for its introduction. We recommend the same bill, not because it is in any wise ideal or as a whole acceptable to the profession, but because any change from present methods would be beneficial and because the operation of the bill in its present form will do more to show the advantages of the system it advocates than years of explanation before committees, or on the floor of the house.

Resignation of Director of Works of Burnham. The resignation of Director of Works D. H. Burnham, which marked the close of the World's Fair and the end of three years of continuous labor, is worthy of more than passing notice. It is not often that from the ranks of private life, with no training but that of a private business or profession to fit him for the office, is there called a man into whose hands such vast interests are placed. The words of a letter addressed to Mr. Burnham, by the Board of Directors, upon his resignation, epitomize the history of the three years:

In parting with you as our director of works, we, the Directors of the World's Columbian Exposition, desire to express our high appreciation of your services. Your work has been grandly and completely done. The last chapter has been written—the book is finished. The world will pass upon its merits, but none can know so well as ourselves how much of the success of this great Exposition has been due to you. More than three years ago, when, by act of congress, the World's Columbian Exposition was located in Chicago, no man had any proper conception of what it was to be. It was to be grand and beautiful, but how vast its grandeur and beauty was to be, or what form it was to take, no one had even dreamed. You were elected our chief of construction, charged with the duty of choosing and directing the designers and artists of this great undertaking and of harmonizing and carrying out their great conceptions. You possessed that rare knowledge of men and their capabilities that enabled you to call to your assistance those best suited to the great work; that breadth of mind to blend their creations into a harmonious whole, and that energy and force to carry the work to an end so glorious and successful as to excite the pride and merit the gratitude of all people.

Mr. Burnham's work is not yet complete, for the department of construction is preparing to publish an elaborate report, which will be profusely illustrated by photographs and give those facts and figures which should be recorded and placed in the great libraries and museums of the world for reference by future generations. In this work no cost will be spared, and every feature of the

designing, construction and government of the World's Columbian Exposition will be spread upon its pages that in any way can enlighten those who in another century may have a similar work to accomplish. The photographs have been taken by the best artists in the country especially for this work, and the only regret is that the work will of necessity be too expensive for general circulation among architects, especially as it is understood that the plates will be destroyed after their use for this publication.

German Architecture at the World's Fair. Aside from the main buildings of the Fair, the most notable architectural work was produced by German architects. The most interesting foreign building was that of Germany; the buildings of the German village on the Midway were examples of German design of different periods and locality, and even each installation of German exhibits, if we except that of Herr Krupp, had special claims to architectural superiority. This is probably due to the architectural revival which is now active in Germany under the direction of the young king, whose brilliant and somewhat erratic course is watched by all Europe. He has said there shall be no more stucco. He has expended more than fifteen millions of dollars upon the royal palaces since he commenced to reign, and is not content with anything but the most modern in plan and appliance any more than he is with what is conventional in design or sham in construction. He has gathered about him the most talented architects and sculptors, and his own talents with the pencil being of no mean order, he makes himself one with them for the general architectural perfection of everything built in his favorite Berlin.

Disappointing Results of Exposition Photography. In contrast with the extraordinary foresight that made the systematic working of all arrangements and details of the Columbian Exposition one of its striking features, stands the utter failure of all photographic work. An arrangement which placed the control of the photographic department beyond the power of regulation by the Exposition authorities, and which admitted to rule a commercial spirit to the exclusion of the artistic, was a mistake the effect of which will be lasting. Nor does this end here, for in the department of Fine Arts, the only department where a publication of photographs of the exhibits has been attempted, the same disappointment is found. The right to photograph was given to a firm, with a sole right to publish. Instead of a natural reproduction of the pictures by the best method, we find a collection of wretchedly engraved and printed plates, the inspection of which is more productive of irritation than pleasure.

Impossibility of Preserving World's Fair Buildings. The close of the Columbian Exposition has been accompanied by all sorts of speculation regarding the future of the buildings which, as they were, formed the greatest architectural triumph civilization has known. In this relation, however, speculation is useless. The close of the Fair saw the end of its glory, and the sooner the public accept the fact and realize that the buildings were but full-sized models of what might be built, and set to work not to preserve them as a whole, but sections of them, for architectural study, the better. In fact, if one-half the energy which is being wasted in trying to organize some plan for

their preservation were put forth in the direction of collecting and housing these examples, a lasting good would be accomplished, when otherwise the result must be but absolute failure. It is probable that the main buildings will stand another year. It is also probable that interested people will try and perhaps succeed in securing control of them, and that a grand hippodrome scheme may be organized for profit next summer; but those who really desire the retaining of these architectural models for further study by the people will give their best energies toward the further establishment of the Columbian Museum project. No systematic plan has yet been adopted in this direction, but will be, and those in charge will require all the financial aid and popular encouragement available to carry it to perfection.

Ernest R. Graham Appointed Manager. A distinguished example of the rare talent possessed by Director of Works Burnham for selecting the right man for the right place is observed in the early selection of Ernest R. Graham and his assignment for duty upon the construction staff. Mr. Graham was first employed in a position which required a mind peculiarly adapted to the management and carrying out details. So successful was he in managing the forces employed in the preliminary stages of construction that he was made and continued to occupy the position under different titles of chief assistant to Mr. Burnham. When the director of works resigned at the official close of the Fair the vast work of government and management was rather augmented than lessened, and this executive work was, by general vote of the directors, placed in the hands of Mr. Graham, with the title of general manager. Mr. Graham will find little glory, and much hard and tedious work in his present office; but his abilities have been so well tried and his knowledge of every detail is so perfect that the work could not have been placed in better hands or receive more honest and thorough supervision. It is fortunate that the Fair authorities could secure one who is in every particular so well fitted to fill the office of general manager.

Success of Columbian Museum Project. The Columbian Museum is not only an established fact, but has already received accessions that when properly grouped will make it the largest museum in the country. The work of collection has been vigorously pushed, and almost every foreign government—we might say almost every exhibitor—has presented something to add to its value. These range from a royal porcelain vase to Norwegian fishing boats, and from the model of the largest steam hammer in the country to the bead necklace of a Digger Indian. Financial support has not been lacking. A citizen of Chicago offers a contribution of \$1,000,000 upon the condition that stockholders in the Columbian Exposition donate a like amount of stock. Over three-fourths the required stock has been presented, and cash gifts of several hundred thousand dollars are already in the hands of the committee. In scanning the lists of exhibits donated to the museum one cannot help noticing that many manufacturers seem inclined to use the museum for advertising purposes. This should be stopped at once. The object should be to make the collection of exhibits representative as well as large, and no machine or product of manufacture should be accepted simply because it represents human ingenuity unless it is perfectly unique in its class.

PAINTING AND SCULPTURE AT THE WORLD'S FAIR.

TREATED AS "ART INSTRUCTED" AND "ART INFORMED."

BY H. C. PAYNE.

THERE seems to be some confusion in the English mind as to limitations and boundaries in the two fields of the poets' and the painters' art. This results in the frequent endeavor to put into painters' terms, thought that is in its nature better adapted to the forms of a literary art.

The first impression we receive from the canvases of Mr. Watts, a painter whose works evince more and a higher quality of imagination than is to be found in the work of any other English painter, unless, perhaps, in that of Sir Frederick Leighton, is of the inaptness of canvas and paint for the expression sought. The thoughts are too spiritual and impalpable for the exact and material forms of this art, and the effort to reduce them to its terms produces much the same effect upon the observer as does a bird imprisoned in a narrow cage. Its wings and song remind us of heaven, but we have ever a keener sense of thwarted aspiration in the imprisoning bars against which it hopelessly beats its wings. Yet while we do not experience that kind of satisfaction in these pictures that results from a perfect adaptation of means to end, we sufficiently realize the exquisite fancy that informs them to feel in their presence nothing short of a keen delight.

We find, as the inevitable sequence to the trait above noted, that motive or subject is almost invariably the first consideration in their art, and that execution is rarely if ever sought or offered as an end. It follows that the chief interest of their representative pictures (and it is only here a question of such), will be found in their spirit rather than in their forms, adequate as these often are. Holding us thus more by their qualities of imagination, and poetic insight and fancy, than by their skill, even when their technique is most orthodox and instructed. I find them in kind, if not always in degree, most representative examples of the "Art Informed."

Our whole sense of artifice is so mastered by the sympathy we feel before Lady Butler's "Roll Call," No. 105, that we are ready to dispense with even more merely pictorial considerations than we are here called upon to do. A remnant spared from the field just fought, stand in line before an officer, who, with passive face and automatic action, performs the routine suggested by the title. I think the artist meant first to glorify the sentiment of military discipline, which masters disability and holds men in their place in spite of deadly weariness and pain, but found herself more in sympathy with the elemental human anguish of the moment than with the relatively artificial ideal of military self-restraint embodied in the conception. However this may be, when we look at this picture, condensing as it does into one epic moment the whole bitterness of war as related to its immediate victims, and suggesting the rest, we feel that the phrase "theirs' not to reason why," though nobly apt for its special commemorative purpose, considered as a principle, embodies a lie, and that these comrades, friends, brothers, sons, fathers, husbands *have* a right to "reason why" all these ties should not be thus ruthlessly broken.

In Sir Frederick Leighton's canvases, No. 274, "Hercules Wrestling with Death for the Body of Alceste"; No. 275, "Garden of the Hesperides," and No. 276, "Perseus and Andromeda," we find in the unconformity in color, line and arrangement to the actual present of our daily experience, an element of correspondence to the remoteness of their themes, which is one of their two distinctive charms. The other consists in a rare quality of repose in their lines and shapes, only possible when the soul and brain conceiving them has so well assimilated the principles of a classic art as to be thoroughly *en rapport* with the spirit of its old still beauty. We find this same distinction of classic repose in the works of Alma Tadema, and in a less degree, for his art was less mastered, in those of Rossetti, and we recognize the immortality in this ancient principle of beauty, not only in the persistent vitality which, through all hostile modern environment, finds this new expression, but even more in the response we find in our own spirits, which rest before them still.

"Daniel," No. 412, by Briton Rivier, is deeply informed with the high spirit of the noble legend, and in the calm regard with which its hero faces death is found that complete spiritual self-possession which, when death is faced for a cause, constitutes the martyr ideal. Harmless he stands before these fierce beasts of prey, who cower and cringe in futile rage, dominated by this steadfast soul. No. 213, "The Last Muster," by H. Herkomer,

while less admirable as painting than Lady Butler's "Roll Call," is painted in the same spirit and holds the same kind of interest. No. 197, "Christ and Magdalen," by Arthur Hecker; No. 92, "A Hopeless Dawn," by Frank Bramley, and No. 93, "For of Such is the Kingdom of Heaven," by the same artist, may be mentioned as justifying, in the fine expression they give to it, the idea which subordinates all merely painting considerations to purpose.

There is, however, a considerable portion of the pictures comprising this exhibit that, treating insignificant moments in an insignificant way, fail utterly to make acceptable the point of view noted as English.

The United States exhibit of paintings, while it holds few pictures outside of its landscapes that either in purpose or execution may be advantageously compared with the highest achievements of foreign art (not English), yet in general excellence is found to rank easily first, and it is to the superlative qualities of its landscapes that the distinction claimed is due. Were the French art as well represented in its painting as our own, this superiority might still be claimed for our landscape art, but would hardly be found to hold in our art as a whole. In landscape art the phase or moment treated has much to do in determining what is required of the painter. The exact touch which might best serve the certainty of definition characterizing forms seen in full, clear daylight, as the foliage and large garden leaves in the foreground of Mr. Peck's "Love's Token," No. 811, would be little apt as a means of interpretation of such phases as are treated in Mr. Tryon's "Rising Moon," No. 987, or in Mr. Whistler's "Nocturne," No. 1102. It is in a certain quality of undefinition that the very charm and essence of such scenes as these lie, as also of such themes as Mr. Murphy has treated in "November Grays," No. 576; Mr. Twachtman, in "Autumn Shadows," No. 1010; Mr. Tryon, in "Starlight," No. 990, and Mr. Innes, in "September Afternoon," No. 602. This repose of evening, this reminiscent sadness of late autumn, this vagueness or this calm of night, are not substantial, defined things to be realized by exact and imitative touch; they are spirits of the air, and laugh to scorn the uncomprehending mortal who thinks thus to chain them. Such precise terms, while they answer well the purposes of clear definition characterizing a broad daylight or sunlight subject, like Mr. Picknell's "Road to Concanneau," No. 829, are too illy related to these things of the spirit to serve as the medium for conveying them.

But not only do such phases require special adaptation of manner, they require even more a special aptitude of soul. In the searching light of commonplace day, shapes may be resolved into component form and transferred by deft, instructed touch, but those dim ones of early morning, or those clothed in the purple veil of autumn or in the shadows of evening, cannot be thus exactly observed; they are not to be found or resolved by the eye, even the keenest and most discriminating. They may only be discerned by the spirit *en rapport*.

It is because Mr. Innes and Mr. Tryon and Mr. Twachtman and Mr. Murphy have been soul to soul with nature that her very spirit comes so home to us when we look at their pictures. We feel before them that in very truth she is ours; her sunlight for gladness; her cool shadows for rest; her calm stars for consolation.

We find in the portraits of Mr. John Sargent and of Mr. Abbott Thayer the ideal illustration of the two points of view offered in this paper. The antithesis is so complete, that it serves not only to make clear the distinguishing and special values of the two aims as related to portrait art, but also to accent the distinction offered as applied to the whole modern art of painting, and we may fittingly conclude a paper that has already reached beyond anticipated limits with a brief comparative analysis of the value of these two principles as embodied in the work of these two men.

The picture of Mr. Sargent's that perhaps best realizes the ideal for which it stands is No. 875, "Mother and Child." That one of Mr. Thayer's that best embodies his ideal is No. 954, "Virgin Enthroned."

These two pictures, then, may serve to illustrate the distinction they embody, not only as applied to their special art, but also as applied to the whole art of today.

To reproduce appearances so effectively as under proper conditions to create illusion, is the technical aim of the modern painters' art. Not beauty, not conventions that modify appearances in its favor, but just the impression of things as they are is its endeavor. It follows that the picture that most nearly produces the impression of actuality will, in a purely painter's sense, have achieved the highest distinction. When a stranger is presented

to us the attributes that impress us first are his or her physical characteristics. We are conscious only or mainly of proportion, height, color of hair, complexion and turn of feature. As we come to know the person, and just in proportion to the degree of our intimacy, do we lose sight of these things until, when it becomes established, our sense of them is so completely merged in the idea of the individual that we do not think of them by themselves at all. Mr. Sargent's picture corresponds exactly in its impression to that which we receive from a stranger when first presented to us. The eye (not too near), receives from his canvas an impression of reality as *objects* of the two people who are his subjects, hardly to be experienced before the work of any other painter represented here, for, while Bonnat's canvases are as to form more convincing, they fall so far short of the vivid color realism that distinguishes this as well as all of Mr. Sargent's pictures, that their impression of actuality is on the whole far less complete. Here, as in the instance supposed, we receive the most vivid impression possible of externals. And this is all, absolutely all, that we do receive. But this is much, very much. It is modern art, "Art Instincted," and though these intensely real forms are a perpetual bar to the intimacy that can only exist when we cease to be first and most aware of them, yet we do, in a certain sense, know these two people. We could distinguish them in a crowd, or recognize them if we passed them by, but we do not know them in the intimate sense in which we know a friend, nor can we ever.

It would, perhaps, be impossible to find in the whole painting exhibit of the Fair a picture that better represented the opposed ideal of an "Art Instincted" than the one of Mr. Thayer's entitled, "Virgin Enthroned." It represents a sweet-faced young woman "enthroned" between two children.

In art, as has been pointed out before, a name is nothing. What a picture in itself is, in character and expression, just that it is and nothing more—or less. A name only makes requirement. It in no smallest degree fills it. Thus a painter might call a picture conceived as is this in all outward respects of form, arrangement and color, "Virgin Enthroned," but unless it embodied in some degree the tender and noble ideal for which the name selected stands, the title would serve only to make its failure conspicuous. Here it is a *fitting* garment to the *soul* which the artist discerned, and which looks sweetly out through its open window. The flesh, the form, the color—the *substance*, in a word—of this central figure and of its companions, do not say to us, as in Mr. Sargent's canvas, "Thus far—no farther." They are not the message, only the conductor which conveys it. It would but confuse the issue now reached, and which may be presented in a final word, to compare the means employed to create the impression produced by these two canvases; enough that they are relatively adapted and sufficient. The real issue which it is here the endeavor to distinguish from its many side ones is that existing between *things* and *ideas* when taken as a purpose in art. It is that between form and spirit when presented as its final result.

WAS SHAKESPEARE AN ARCHITECT?

SO many occupations have been assigned to Shakespeare that we may be pardoned for assigning him another. Was he an architect? or perhaps a builder? From his writings it would so appear. Who but an expert could be so well informed as the following extract indicates:

"When we mean to build,
We first survey the plot, then draw the model;
And when we see the figure of the house,
Then must we rate the cost of the erection;
Which if we find outweighs ability,
What do we then but draw anew the model
In fewer offices, or at least desist
To build at all? Much more, in this great work,
* * * * * should we survey
The plot of situation and the model,
Consent upon a sure foundation,
Question surveyors, know our own estate,
How able such a work to undergo,
To weigh against his opposite; or else,
* * * * *
Like one that draws the model of a house
Beyond his power to build it; who, half through,
Gives o'er and leaves his part-created cost
A naked subject to the weeping clouds
And waste for churlish winter's tyranny."

Second part of King Henry IV, Act I, Scene III.

The foregoing lines are as true today as when they were written. They are not for a day, but for all time. We do not recollect of attention having been called to them before and therefore give them here, hoping that they may be noticed by some Shakespearian scholar who may be able to vindicate our right to claim the Bard of Avon as one of our own brotherhood.

DIRECT METHODS IN ARCHITECTURAL PERSPECTIVE.

BY CHARLES E. ILLSLEY, A.M., C.E., ARCHITECT.

CHAPTER VII.

PRELIMINARY STEPS.

IN beginning an architectural perspective three preliminary questions arise, namely, the position of the object, the position of the picture plane, and the standpoint of the observer. (See Fig. 26.) Once understood, these preliminaries actually receive but little thought in ordinary practice. Nevertheless a familiarity with them is important.

97. The plane of the picture may stand anywhere between the observer and the object. For convenience it is usually placed so as to touch a principal corner of the building, as illustrated in Fig. 109, or it stands parallel with a principal front or side, as in Figs. 110 and 111. Since in the first case the main faces of the building

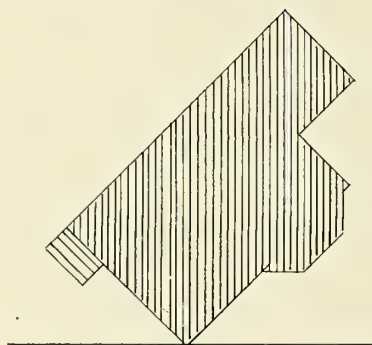


FIG. 109.

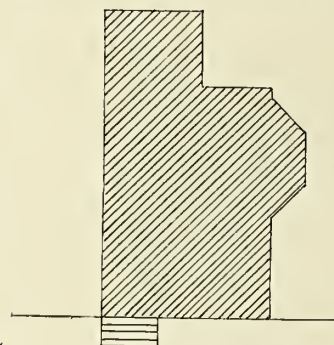


FIG. 110.

are oblique to the picture plane, the picture is called an *oblique perspective*. In the second case the picture is called a *parallel perspective*, whether the picture plane actually coincides with the front of the building, as in Fig. 110, or is at some distance from it, as in Fig. 111.

98. In oblique perspective, while theoretically the building may stand at any angle whatever with the picture plane, there is considerable practical convenience in having its principal faces at angles of forty-five degrees with the plane of the picture; and this course will generally be pursued.*

99. The standpoint of the observer, often called the *point of station* (Section 85), may vary in three directions: it may be exactly in front of the object or at the right or left of it; the observer may stand very near the object or far away; and he may be on the same level with it or above or below that level. There are æsthetic reasons why it is usually advisable to place a perspective view somewhat out of the geometric center of the sheet on which it is drawn; and it is evident that the observer who wishes a fair view of two faces of a house must usually stand somewhat at one side of the front and not exactly before it.

100. As to his altitude, it is commonly assumed that the observer stands on the same level with the visible base of the building. This brings the horizon about five and one-half feet above the base line of the building (Section 80). Where the site is a hillside or in a valley, the height of the horizon must vary accordingly. Raising the horizon depresses the picture, making it look as if the building stood in a valley. (See Fig. 112.) If the horizon be entirely above the building, so that its roofs are seen, as in Fig. 112, the perspective is often called a *Bird's-eye View*.

Lowering the horizon, on the other hand, elevates the building, as if it stood on a hill-top. (See Fig. 113.†)

* It is understood, of course, that architectural perspectives are drawn to scale, usually of four or eight feet to the inch. Taken literally, a drawing on a picture plane touching the object would be of the same height as the object itself, and a sheet twenty-five feet high would be needed for a small two-story house.

† The building illustrated in Figs. 112 and 113 will be recognized as the same which appeared in Fig. 108. The differences in the views are due to extreme variations in the altitude or depression of the horizon.

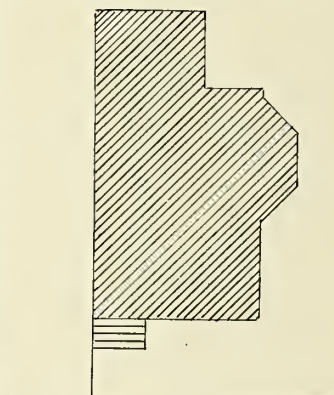


FIG. 111.

101. In respect to the remoteness of the observer from the object the practice of artists varies, each being in large measure a law to himself. One rule is to select a distance from the object equal to three times its height.* Another rule is to choose a

with little thought about the distance to which any particular drawing corresponds.

102. Fig. 114 shows the outline plan of an octagonal building on a square base. $P_1 P_r$ is the trace of a picture plane placed so as to coincide with the front $C D$ of the base. (Section 97.) P_s is the point of station (Section 99), at a distance in this case of about twice the width of the building. $P_s P_1 P_s P_r$ are the plans (Sections 19 and 85) of oblique lines of vision (Section 74) parallel with the diagonals $B D$, $A C$, and, of course, with the beveled sides of the building. $P_s E$ is the plan of a normal line of vision. (Section 74.)

103. Draw at will a horizontal line $V_1 V_r$ for a horizon. Note the points V_1 , V_r exactly over P_1 , P_r , and S exactly over P_s . S is the point of sight (Section 84), and V_1 , V_r are vanishing points of horizontal lines parallel with the diagonals $B D$, $A C$. (Sections 76, 86, 91.) They may be designated *Vanishing Points for Diagonals*, left or right. They are also called *Points of Distance*, partly because the lines $P_s P_1$ and $P_s P_r$, being at forty-five degrees with $P_1 P_r$, the distance $S V_1$ or $S V_r$, which by construction equals $E P_1 = E P_r$, is also equal to $E P_s$, i. e., the points V_1 , V_r are at the same distance from S as the observer's standpoint from the picture plane. Another reason is that V_1 and V_r are used in parallel perspective in locating the *distances* of points remote from the picture plane.

104. Hence if it be required to draw the perspective of a building as seen by an observer at a prescribed distance, one has

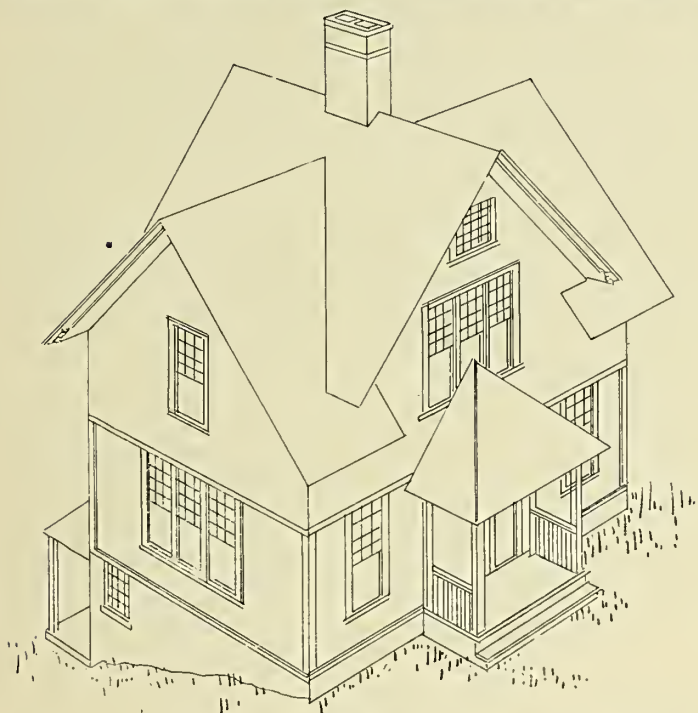


FIG. 112.

standpoint from which lines drawn to the extreme limits of the building will make an angle not exceeding sixty degrees, the theory being that this angle embraces all that can be seen comfortably at one glance and without turning the head. In the programme for the St. Louis City Hall competition it was required that perspectives should be drawn for a standpoint three hundred feet distant.

Paul Veronese is said to have made his "distance" equal to "three times the size of his picture." Raphael is said to have made his distance equal to the base of his picture, while Leonardo da Vinci took his at six times the width of his picture. So much for



FIG. 113.

tradition. Since linear perspective was a subordinate matter with the historic painters, a doubt must be entertained as to their devoting much thought to accuracy in locating their "distances" or to scrupulously observing them when located. Architectural draftsmen, likewise, soon learn by experience what arrangement of vanishing points suits them best, and then work by habit

* Since it is customary to locate the picture plane so as to touch the object (Section 97), the distance of the observer from the object is identical with his distance from the plane of the picture. The two expressions become synonymous.

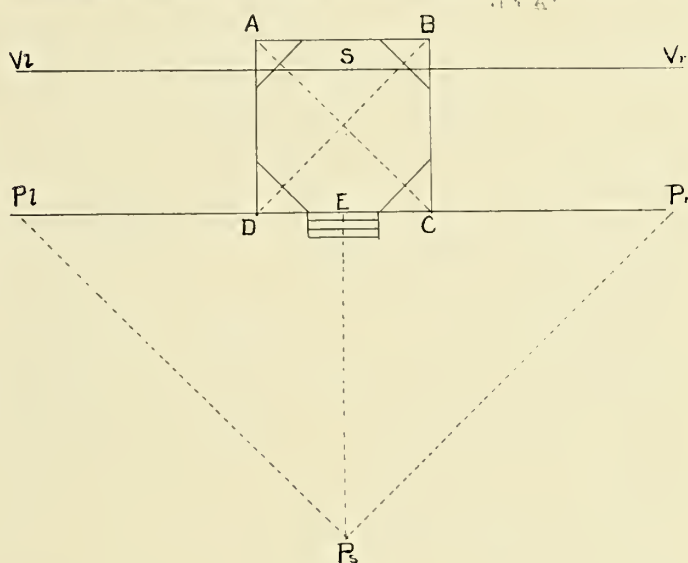


FIG. 114.

only to locate V_1 and V_r on the horizon, each at the prescribed distance by scale to the right and left of S . Since S (Fig. 114) is the vanishing point of lines normal (Section 74) to the picture plane, it will be convenient to designate all lines converging at S as *Normals*. Similarly the term *Diagonals* will be applied to lines converging at V_1 or V_r , since these are the vanishing points (Section 103) of all horizontal lines at angles of forty-five degrees with the picture plane.

The term *Horizontals* will apply to perspective lines parallel with the horizon, such as the cross lines in Fig. 115, Chapter VIII.

CHAPTER VIII.

PARALLEL PERSPECTIVE.

Parallel perspective having been defined in the preceding chapter (Section 97), we proceed to the solution of practical problems.

105. PROBLEM I.—To draw a horizontal pavement of square blocks. Fig. 115.

On any convenient line lay off the horizon $V_1 S V_r$, so that $S V_1$ and $S V_r$ shall each equal to scale the distance of the observer from the object (as well as from the picture plane, Section 101). In parallel perspective certain sides of the square blocks will be parallel with the picture plane, while the other sides will be normal or perpendicular to this plane. The perspectives of the former are parallel with the picture plane (Section 91); the perspectives of the normal sides converge at S (Sections 84, 85, 104).

Now select any convenient line, as $A B$, parallel with the horizon $V_1 S V_r$, to serve as the base of the picture. ($A B$ actually represents the horizontal trace of the picture plane (Section 85).

Lay off along A B the full size to scale of the pavement and of each row of squares, and from the points of division draw lines converging at S. These are the perspectives of the normal sides of the squares and are called *Normals*. (Section 104.)

Draw the diagonal A Vr, and through its intersections with the successive normals draw horizontals (Section 104) A' B', A'' B'', etc., as shown. From C, the end of the last horizontal, another diagonal may be drawn toward Vr, which will give another block of squares of equal size and number. This process may be repeated indefinitely.

106. In Fig. 115, since A a' is the diagonal of the perspective square on the base of A a, it follows that a a', the perspective of a perpendicular to A a, is equal in length to A a. Likewise the real

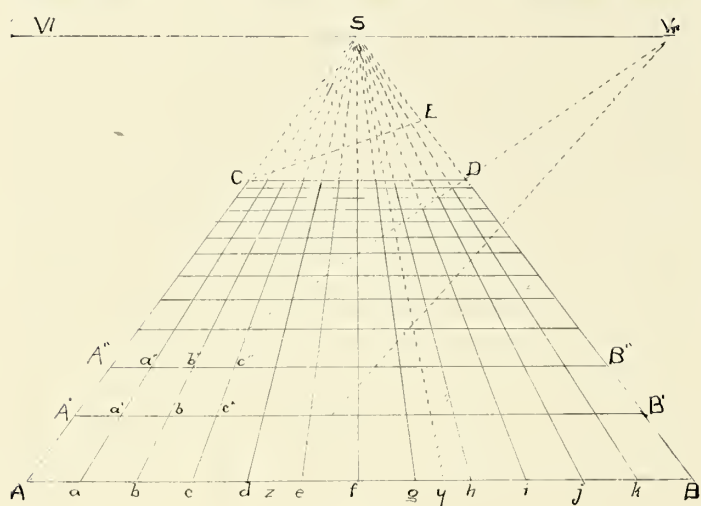


FIG. 115.

length of the line whose perspective is b b' is the distance A b. In general, the intercept on any normal between A B and the diagonal A Vr equals perspectively the distance from the foot of that normal to the foot, A, of the diagonal.

Hence we have a rule for locating any point in parallel perspective as follows (Fig. 115):

Measure along A B the exact distance of the point to the right or left of A, or B. Through the point so found, as y in Fig. 115, draw a normal (Section 104) y s. Measure from y along A B the distance y z of the required point away from the picture plane. Through z draw the diagonal z Vr; its intersection x with the normal y s is the perspective required.

This rule is as universal as it is simple.

107. PROBLEM II.—To draw a horizontal pavement of octagonal blocks. Fig. 116.

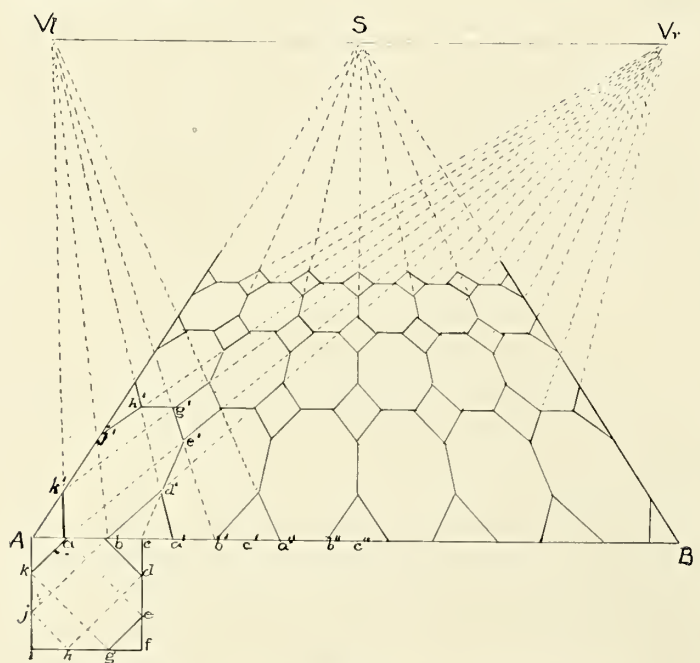


FIG. 116.

Having drawn the horizon and base line A B and marked V, S and Vr as in Problem I, Fig. 115, draw to scale where most convenient one octagon of true size as at A, and repeat along A B the points a', b', c', a'', b'', c'', etc., at their proper distances.

Through a b, a' b', etc., draw diagonals (Section 104) right and left. Through A, c, c', etc., draw normals (Section 104) converging at s.

By construction c a' = c b, hence d' is the perspective of d, in the plan of the octagon, hence d' e' on the normal from c is the perspective of d e. (All normals (Section 104) are perspectives of lines perpendicular to the base A B, which represents the picture plane.) The point e', the perspective of e, is at the intersection of diagonals from a and b', or at the intersection of either diagonal with the normal from c. The line h' g' is a horizontal (Section 104); the point j' is on a diagonal from b, and k' is on a diagonal from a.

The repetitions are made without difficulty. Since the distances A b, a c, etc., in the octagon plan each equal the half diagonal of the square A c f i, they could be set off at once without completing the octagon, which has been drawn in this figure mainly for clearness of illustration.

108. PROBLEM III.—To draw a pavement of equilateral triangles. Fig. 117.

This problem involves the location of auxiliary or secondary vanishing points V' V''. Select the horizon and base line and locate V, S, Vr as before. Draw one equilateral triangle c d f of the size desired and project its apex at g. By construction f g is perpendicular to A B at g. Draw the normal g s. This is the perspective of f g produced to infinity. Locate f on the normal g s by the rule in Section 106, i. e., measure h g equal to f g and draw

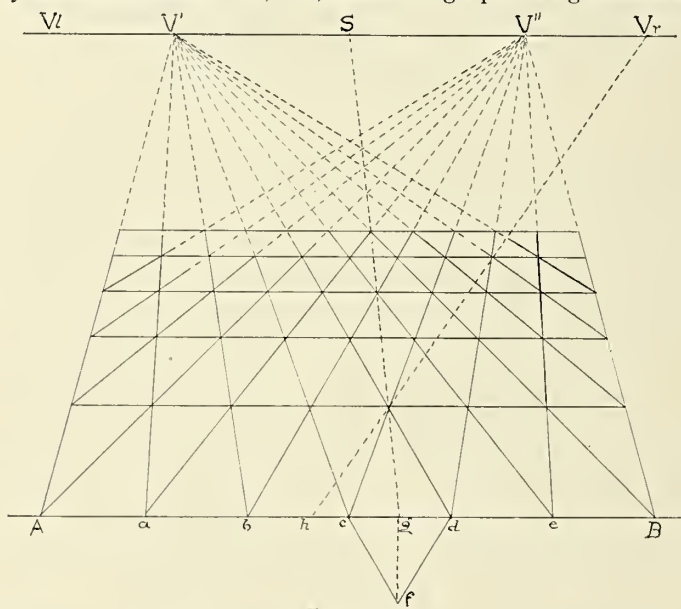


FIG. 117.

the diagonal h s. Its intersection i with g s is the perspective of f.

Join c i and d i. These complete the triangle c i d, which is the perspective of c d f. Produce c i to the horizon at V'' and produce d i to the horizon at V'. The points V' V'' are vanishing points for the perspectives of all the slant sides of the triangles. The perspectives of the bases are horizontals. (Section 104.)

It will be observed that in Problem III no use is made of the points of distance V, S and Vr after locating the point i. Since the equilateral triangle is symmetrical the points V', V'' must be equidistant from S on the horizon. Hence when one is found the other may be obtained by measurement.

109. PROBLEM IV.—To draw a pavement of regular hexagons. Fig. 118.

Here again, auxiliary vanishing points V', V'' are used. Having arranged horizon and base as in the preceding problems, construct as shown below the base line one hexagon and its connections. Project a, b, c and d on A B at a'', b', c', d''. All the points of the perspective hexagons are on secondary diagonals to V' or V'', all the slant sides are drawn toward the same vanishing points, and the remaining sides are horizontals. (Section 104.)

To find V' draw the normal a'' s. Lay off a'' g equal to the half height of the hexagon, and draw the diagonal g Vr. This diagonal crosses the normal at a', the perspective of a. Join b' a' and extend it to the horizon at V'. V' is the vanishing point of all slant sides parallel with a' b'. Locate V'' by measurement at the same distance from S as V'.

110. In the preceding problems it may be observed that while both points of distance, V, Vr, are obtained, but one has been

used, except in Fig. 116, where from the multitude of slant lines toward the left, all at forty-five degrees, it has been convenient to use *Vl*. It could have been dispensed with even there. The rule

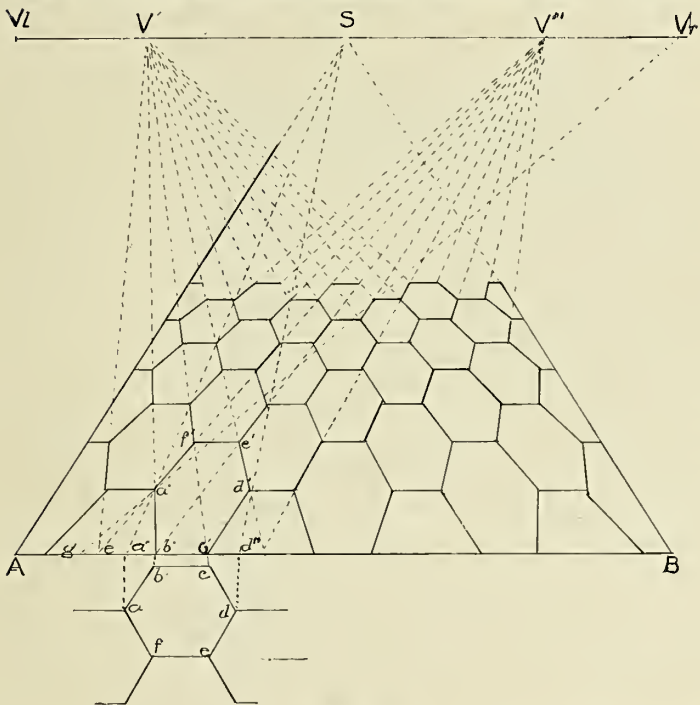


FIG. 118.

(Section 106) for locating any point whatever in parallel perspective requires but two vanishing points, namely, the point of sight, *S*, and one point of distance (Section 103). For this reason the

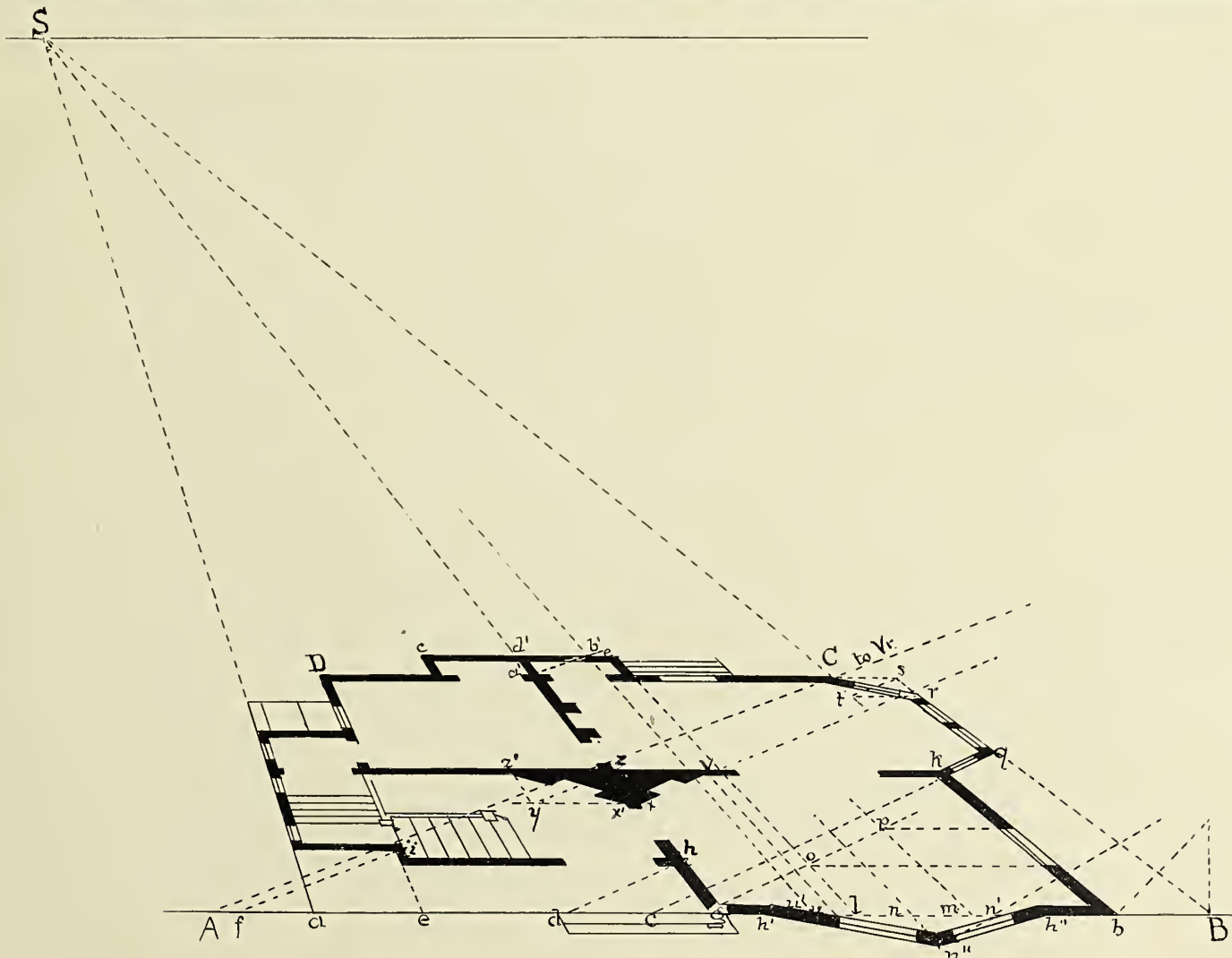


FIG. 119.

term "Two Point Perspective" is sometimes applied to this method. The usual name, Parallel Perspective, is preferred as being more descriptive and quite as intelligible.

It is often quite an advantage to be able to dispense with one point of distance, since the whole width of the drawing-board can

then be used for the observer's distance (Section 103) from the object. Where both points are used the "distance" must be restricted to half the width of the drawing-board or one point will come beyond the edge of the board.

III. PROBLEM V.—To draw the plan of a house in parallel perspective. Fig. 119.

While the plan of a house, for obvious reasons, is best studied geometrically, there being no occasion for contemplating it in perspective, as it is never seen in that way, the resources of perspective are ample for the development of a complete floor plan without the aid of a previously prepared geometric plan. For illustration, it is necessary here to give the plan (Fig. 120), which is to be drawn in perspective, as the readiest means of showing what is required, but it will be observed that no use is made of the geometric plan except to obtain from it the shapes, dimensions and arrangements which are to appear in the perspective plan.

Henceforth only two vanishing points will be used, namely, *S* at the left side of the drawing, and *Vr* far to the right (not shown in the illustration). The distance from *S* to *Vr* (i. e., the distance of the observer from the building), is about three times the extreme width of the building. The horizon is taken high up on the paper for convenience. So far as accuracy is concerned, it is immaterial how high or how low the horizon is taken when drawing the plan.

112. Select *A B*—representing the picture plane (Section 105)—at will, and lay off on it the front of the house, *a B* being its extreme width. Draw normals *a S*, *e S*, *g S*, *b S*, *B S*, etc., for the sides and longitudinal partitions. Lay off *b A* equal to the depth of the house through parlor and dining-room, and draw the diagonal *A C*. Its intersection, *C* with *b S*, is the rear outside corner. Draw the horizontal *C D* to meet the normal from *e*.

Lay off *g l*, the width of the dining-room closet plus the six-inch partition, and draw a normal *l e'*. To obtain the depth of the

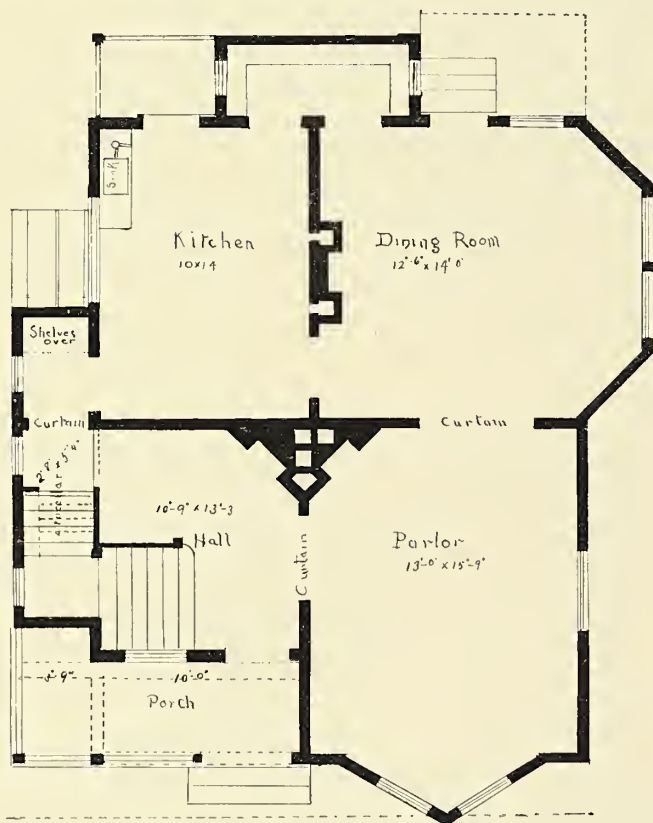
closet lay off the correct depth *g u'*, draw normal from *u'*, and a diagonal from *a'* in the rear wall of the main building. It crosses the normal at *b'*. Draw a horizontal through *b'* for outside wall of closet. The kitchen closet being of the same size, lay off *c' d' = d' e'*. Draw a normal through *C'* to meet the rear line *C D*.

113. To locate the cross partition, lay off the depth of the parlor plus the thickness of the front wall at b c. The diagonal c k meets the normal b k in the point required.

To draw the front bay, lay off its true width, h' h'' along A B. Find by measurement the middle point, n, of the parlor front wall. Draw a normal through n. Lay off n n' equal to the projection of the apex of the bay beyond the front wall. A diagonal n' n'' meets the normal n n'' in the apex n'' of the front bay. Join n'' h' and n'' h''.

The dining-room bay has its sides at forty-five degrees with the house walls. Lay off b B, the true projection of the bay, and draw the normal B s. It crosses the diagonal k q at q. The portion q r is the end wall of the bay. To locate r produce the rear wall D C to meet the normal B s. Draw the diagonal s t to meet the normal b k produced. Then draw the horizontal t r. The quadrilateral C s r t is a perspective square; hence r s, its diagonal, is the slant side at the rear of the bay.*

114. To draw the side window of the parlor. Along the front of the parlor lay off the half width of this window each way from n, as l n, n m. Draw normals l o, m p. Lay off on l g the distance of the window back from the front wall and draw the diagonal



* First Floor *

FIG. 120.

g p. Through the points o and p, where this diagonal cuts the normals from l and m, draw horizontals. Their intersection with the side wall marks the window desired.

To draw the parlor fireplace, lay off on A B its true projection g u within the parlor. Draw the normal u v and the diagonal v x. The latter is the face line of the fireplace.

To draw the hall fireplace, draw through x the horizontal x y. Produce the inner walls of the hall to meet at z. Draw the diagonal z y to meet x y, and draw the normal y z'. z x' y z' is a perspective square; hence x' z', its diagonal, is the line required. The jamb reveals in the hall fireplace are diagonals converging at V r; those in the parlor may be drawn parallel with x' z' as a sufficiently close approximation.

To locate the width of the front porch, lay off at g d its true width. Draw a normal from g and a diagonal from d. They meet at h, through which draw a horizontal.

* Were the left point of distance (Section 103), VI, available, the side r t could be drawn at once. But VI would fall as far to the left of S as V r is to its right, and the practical inconvenience of maintaining and using such distant vanishing points is a consideration in favor of the constructions here employed.

(To be continued.)

OUR ILLUSTRATIONS.

A country house. Manly N. Cutter, architect, New York.
Residence on Clemens avenue, St. Louis. E. A. Manny, architect.

Residence of Frank Wyman, Cabanne Place, St. Louis. E. A. Manny, architect.

First National Bank, Terre Haute, Indiana. Jenney & Mundie, architects, Chicago.

Gate Lodge, Forest Lawn Cemetery, Detroit, Michigan. Edw. C. Van Leyen, architect.

Boat house, gymnasium and armory. Conover & Porter, architects, Madison, Wisconsin.

House for J. L. Cochran, Edgewater, Illinois. George W. Maher, architect, Chicago.

St. Peter's Church, Niles Center, Illinois. Schlacks & Ottenheimer, architects, Chicago.

Sketch of residence for F. W. Kellogg, Detroit, Michigan. Edw. C. Van Leyen, architect.

Central M. E. Church, Sault Ste. Marie, Michigan. D. P. Clark, architect, Bay City, Michigan.

The Fort Wayne Saengerbund Club Building. Wing & Mahurin, architects, Fort Wayne, Indiana.

State Normal School, Stevens Point, Wisconsin. Dwight H. Perkins & George W. Selby, architects, Chicago.

The Champlain Office Building, Chicago. Holabird & Roche, architects. The structure will be 103 by 50 feet, fourteen stories high, skeleton steel construction, fireproofed. The walls will be of buff terra cotta.

The Blackstone Public Library, Branford, Connecticut. S. S. Beman, architect, Chicago. This library building is now in course of erection at Branford, Connecticut, by T. B. Blackstone, president of the Chicago & Alton Railroad Company. When completed it will be presented by Mr. Blackstone to Branford, his native town, as a memorial to his father. The building is to be thoroughly fireproof, with steel beams and tile floor arches and partitions. The exterior walls, including roof of dome, will be of light pink Tennessee building marble, finely ribbed surface. The walls of rotunda, vestibules and halls will be faced with marble, and staircases will be of same materials. Lecture hall finished in mahogany, and balance of building in white oak. The main entrance doors to be of bronze. The building is to be completed by May 1, 1895, and the cost will be \$250,000.

Photogravure Plate: Residence of G. W. Cass, No. 2713 Michigan avenue, Chicago. Henry Ives Cobb, architect.

PHOTOGRAVURE PLATES.

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Addition to The Standard Club, Chicago. Adler & Sullivan, architects.

The Omaha Apartment Building, Chicago. Pond & Pond, architects.

Residence of Hobart C. Chatfield-Taylor, Chicago. Francis M. Whitehouse, architect.

Residence of George A. Severns, Jr., No. 3831 Michigan avenue, Chicago. L. G. Hallberg, architect.

Clark Hall, Western Reserve University, Cleveland, Ohio. Richard M. Hunt, architect, New York. Two plates are given, showing a general view and a detail.

North Entrance to Fisheries Building, World's Columbian Exposition, Chicago. Henry Ives Cobb, architect, Chicago. This building and the peculiar characteristics of its decorative features have already been described in our August number. The triple-arched entrance here shown is a duplicate of that which is seen on a smaller scale in our photogravure of the south entrance.

NEW PUBLICATIONS.

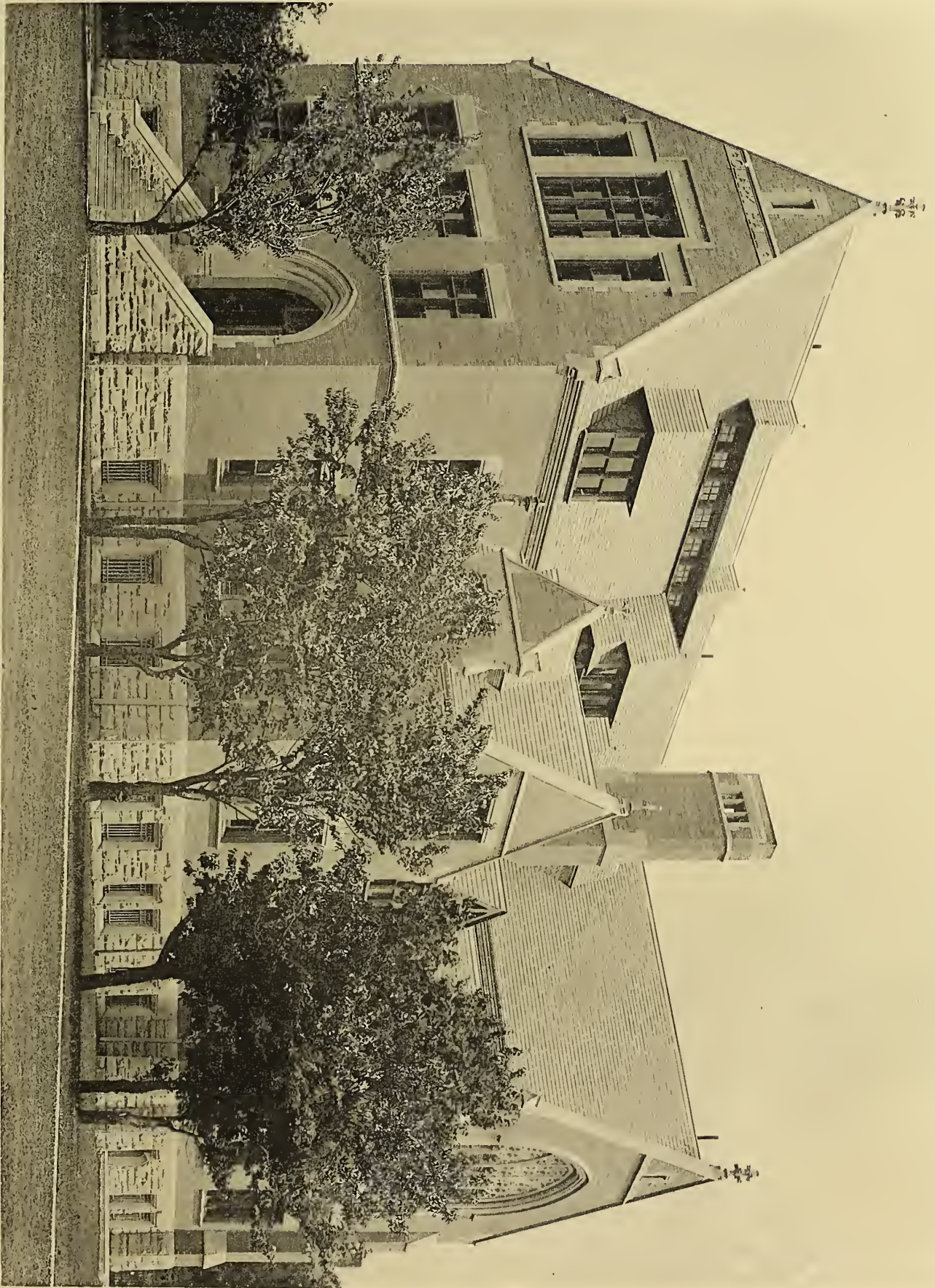
ARCHITECTURAL SKETCHES. By Mr. Frank W. Beall, Architect, New York.

Readers of the architectural journals will recognize Mr. Beall's name as one frequently associated with clever illustrations of domestic architecture. He has recently issued under the above title a neat and quite attractive little volume in boards, containing numerous examples of his work, both in the plans of houses and their exteriors, also various interesting bits of detail.

HOW TO FRAME A HOUSE. By Owen B. Maginnis. Published by the author at 356 West 124th street, New York. Price \$1.

Mr. Maginnis may be remembered as the author of books on "Practical Centering," "How to Join Moldings," etc., etc. His latest work is in pamphlet form, containing thirty-one pages, 8 by 11, with thirty cuts. There are twelve chapters, of which six are devoted to Balloon Framing; the rest to Difficult Roof Framing. The illustrations are well drawn and to a liberal scale, and, while the lettering and figuring is at times more rough than graceful, it is legible and sufficient, and the drawings are very good representations of working drawings as actually made by a competent practical man. Liberal use is made of isometric projections for framing details.

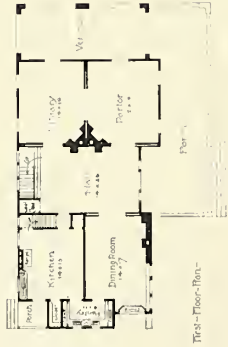
In the second part the writer discusses the framing of simple roofs, of hip and valley roofs, roofs of irregular plan, and of pyramidal, hexagonal, conical and circular (?) roofs. This half of the book is less satisfactory than that on balloon framing. The construction of domes is not referred to at all, a quite impractical rule is given for drawing a hexagon, the reader is told that the octagon "can be done in any of the numerous ways now in use"; and in other respects the value of what is given suffers from what is left out.



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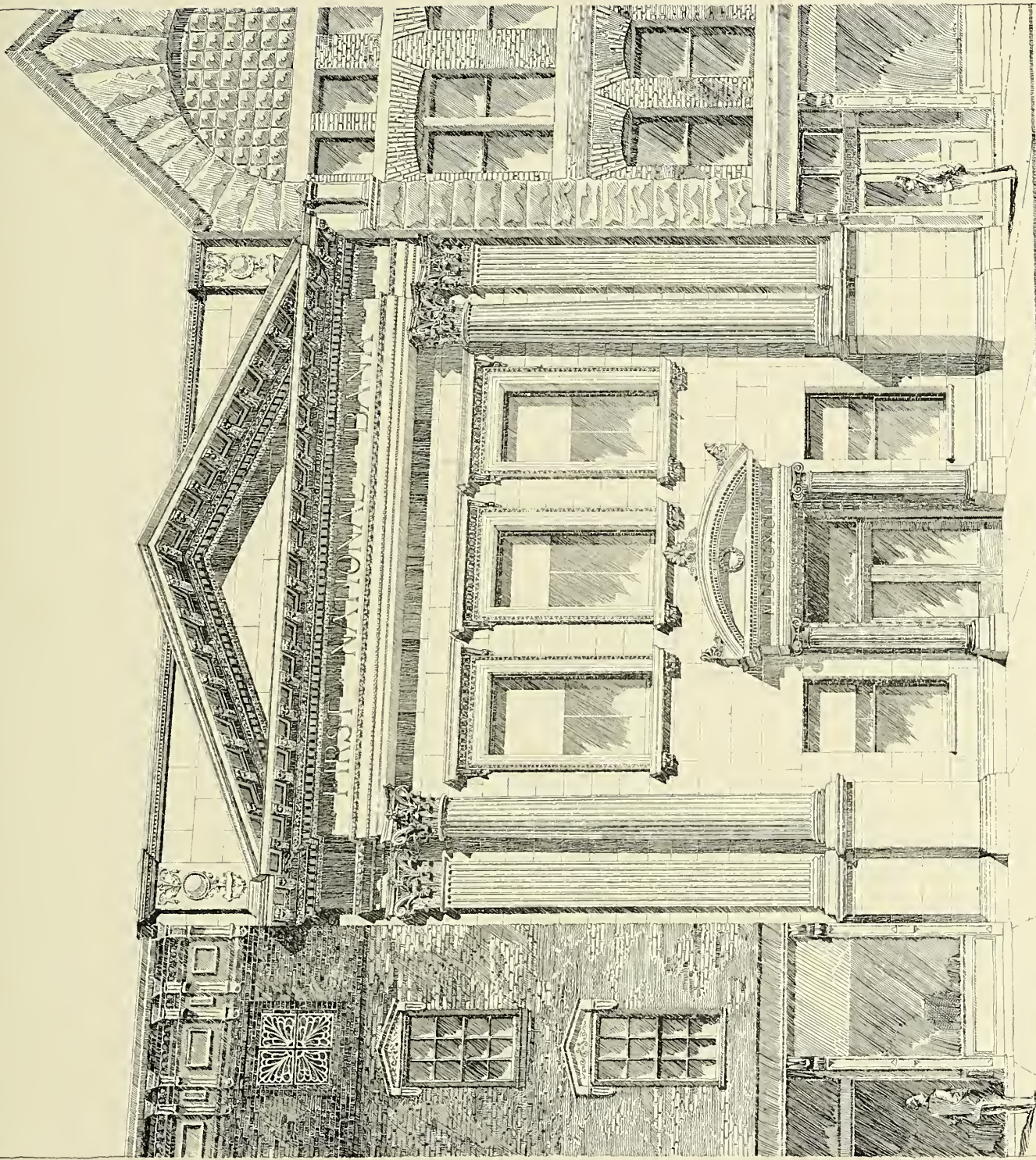
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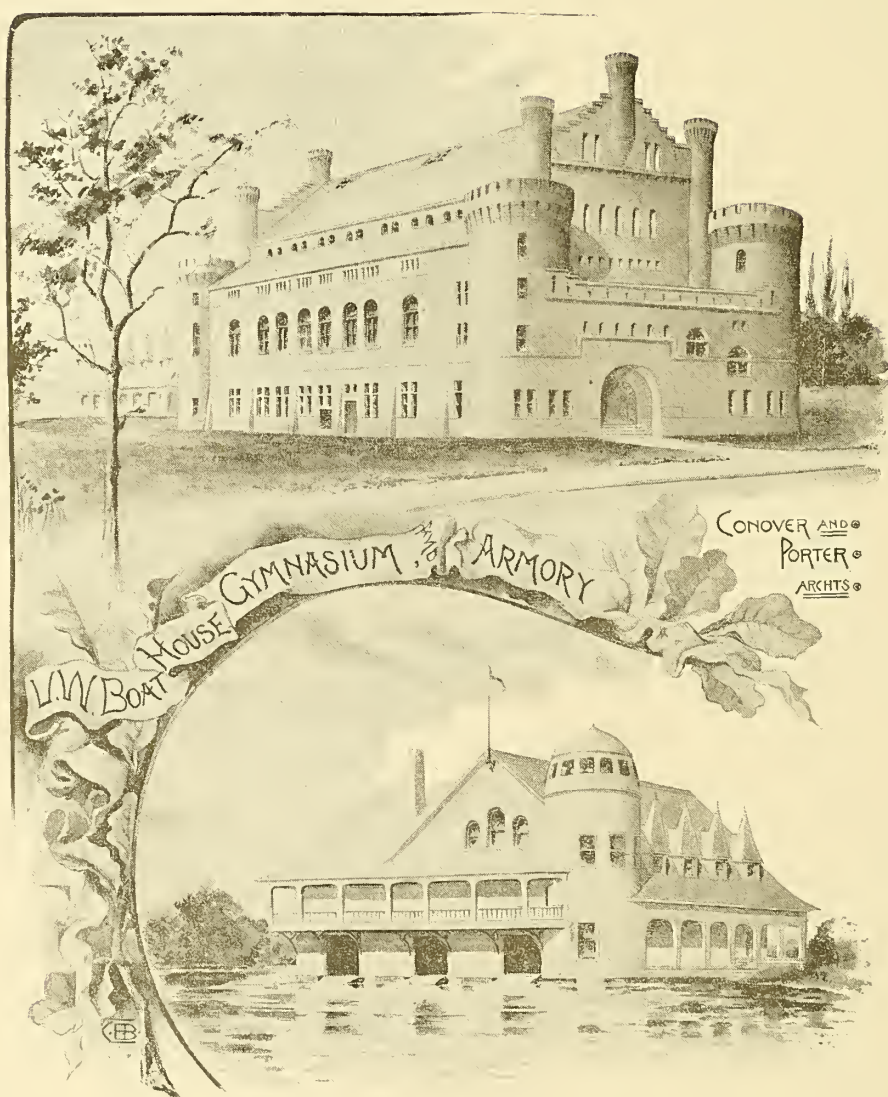
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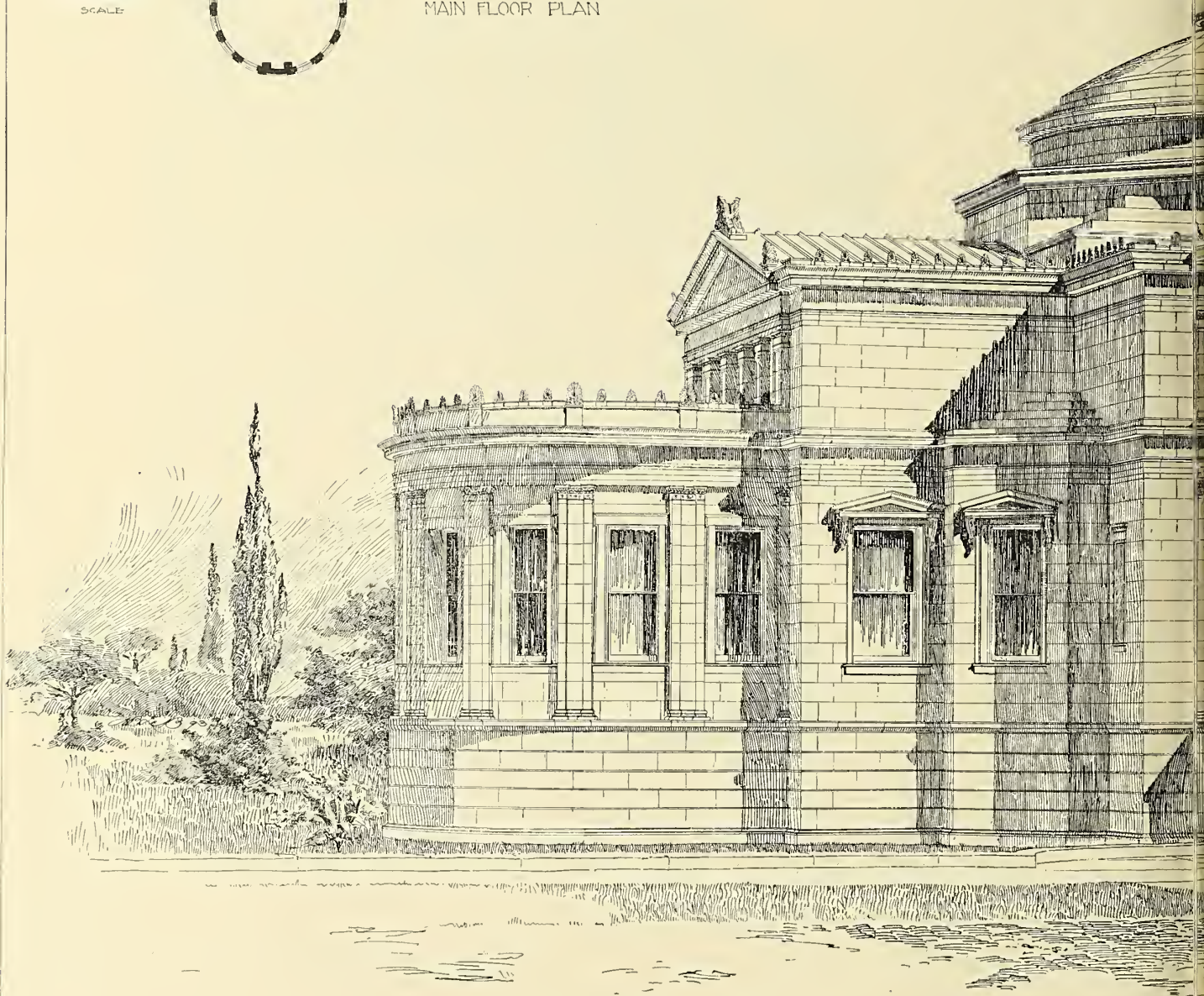
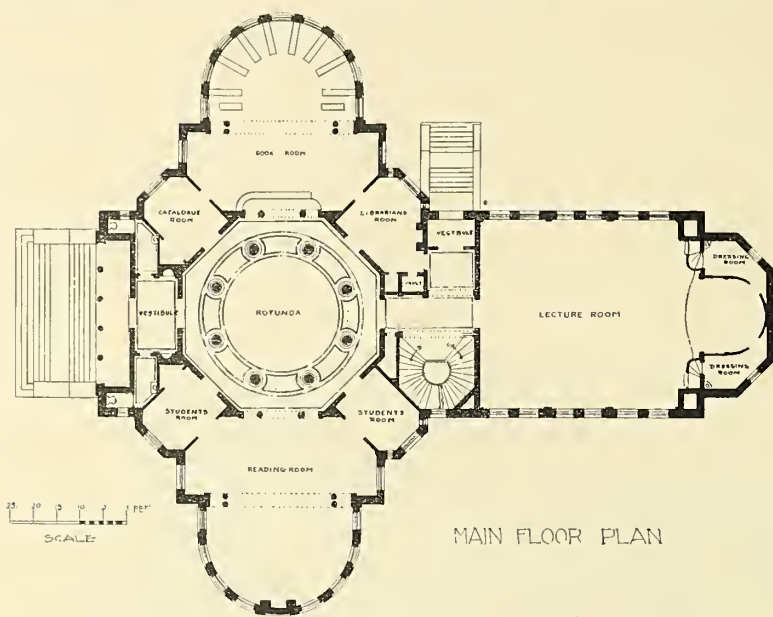
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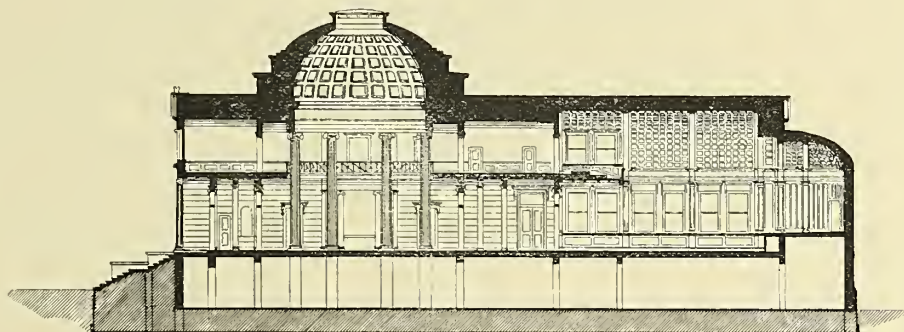
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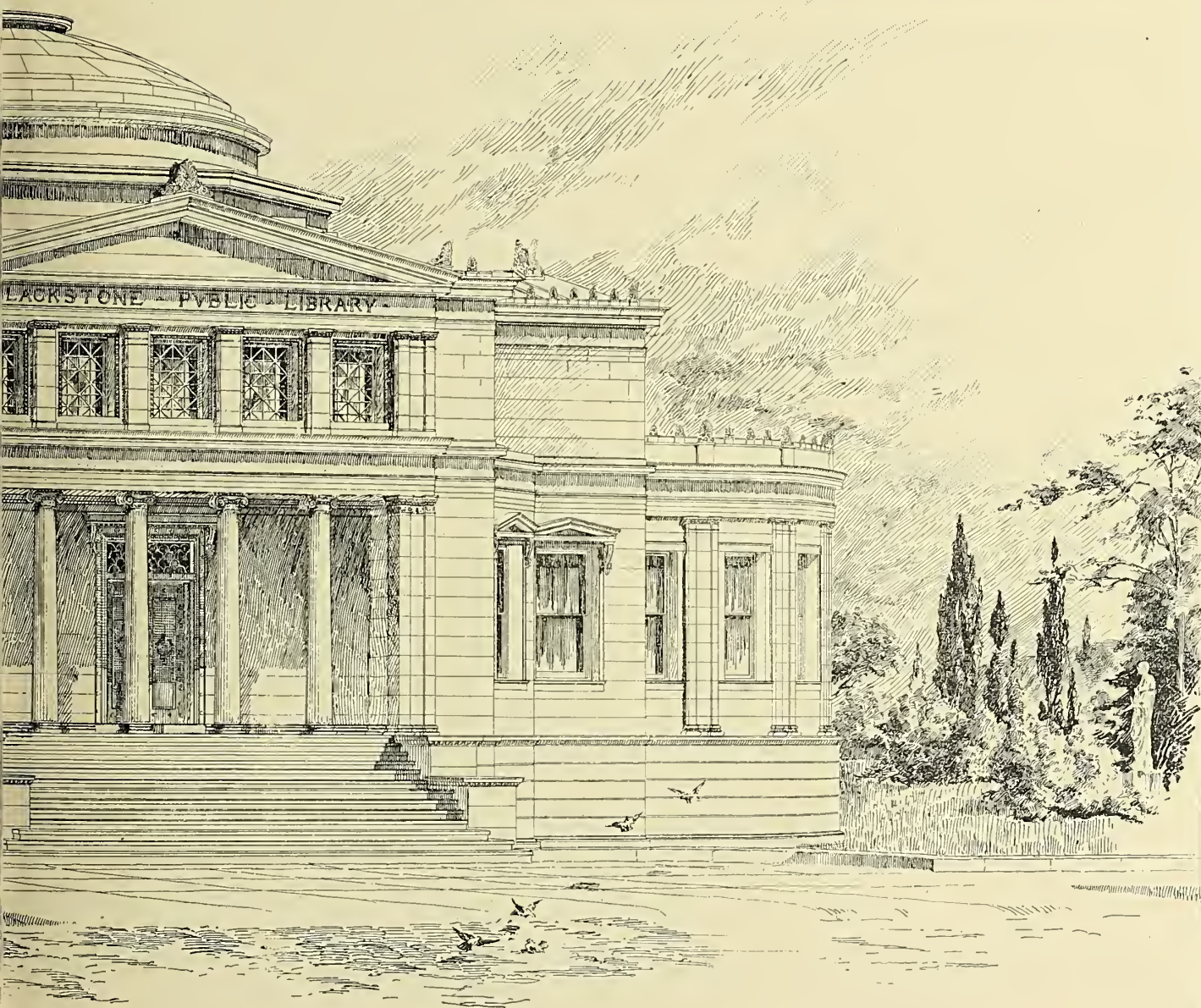
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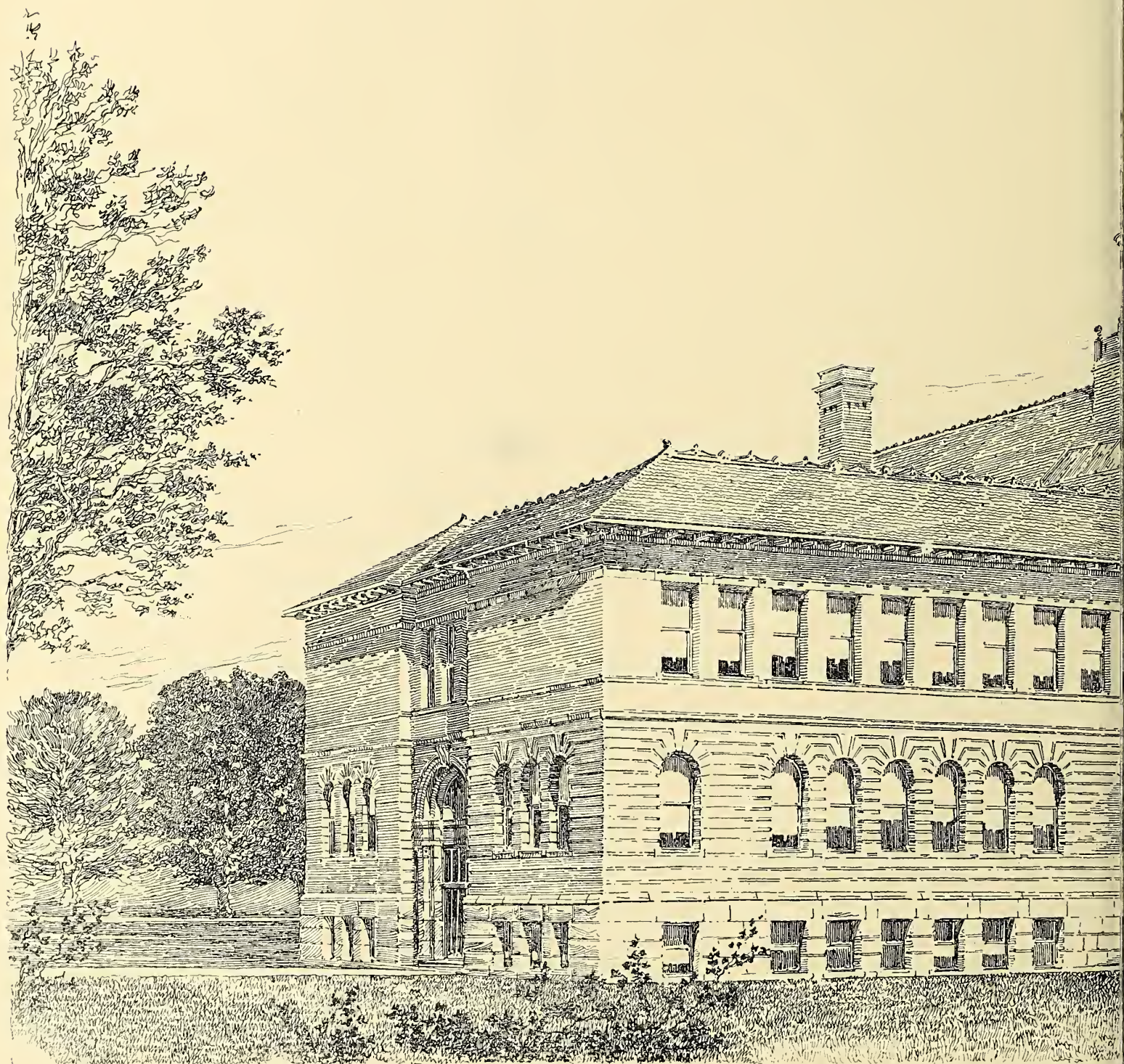
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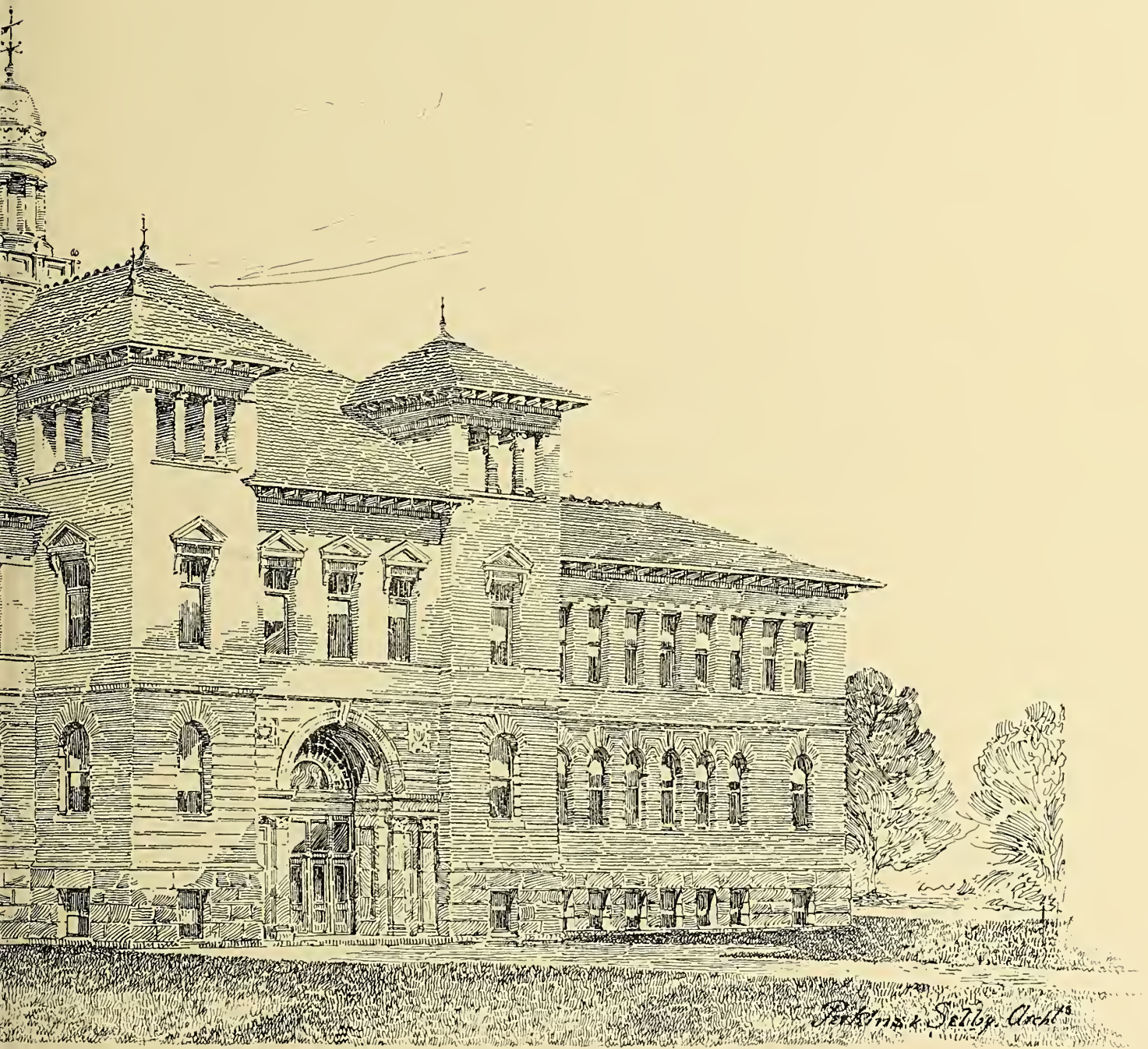
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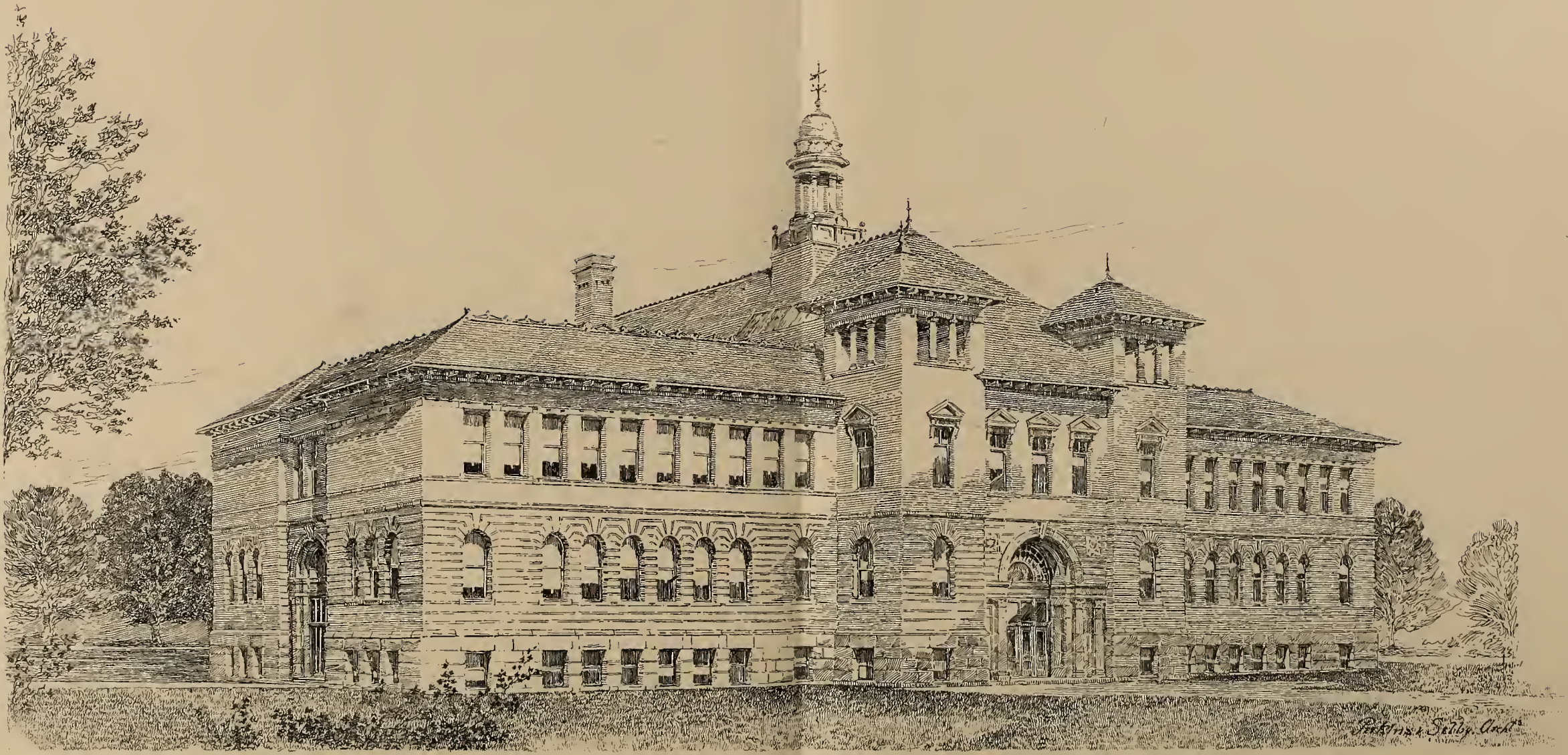
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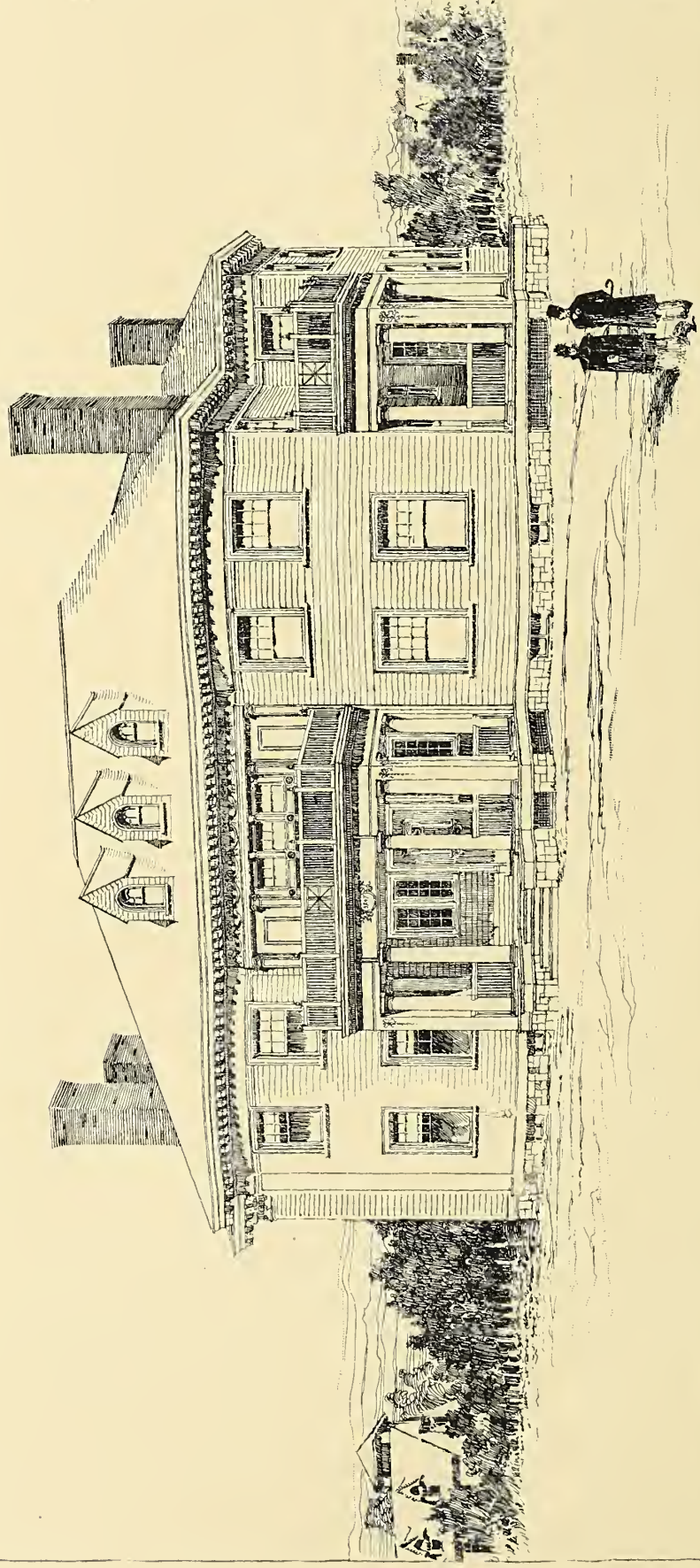
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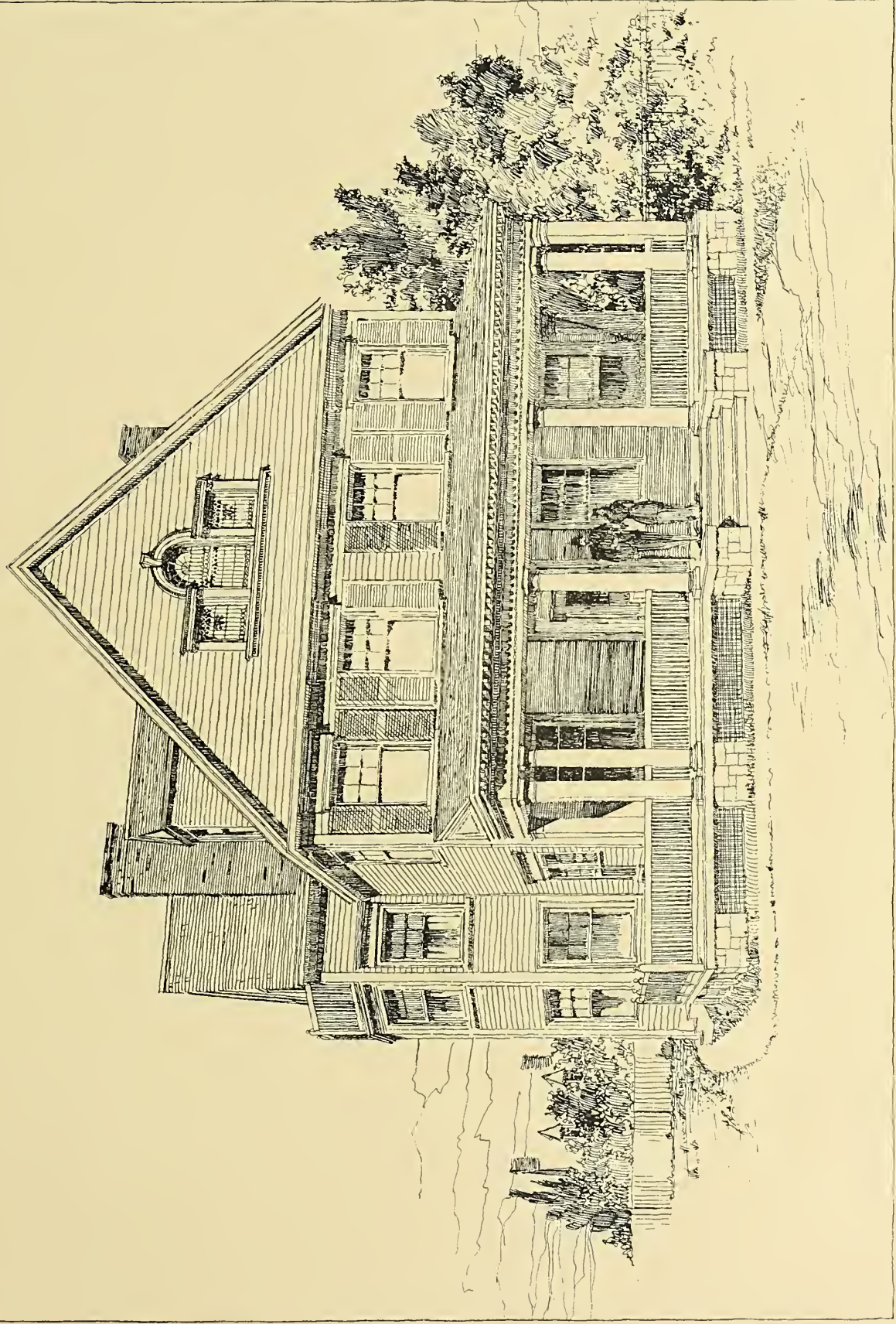


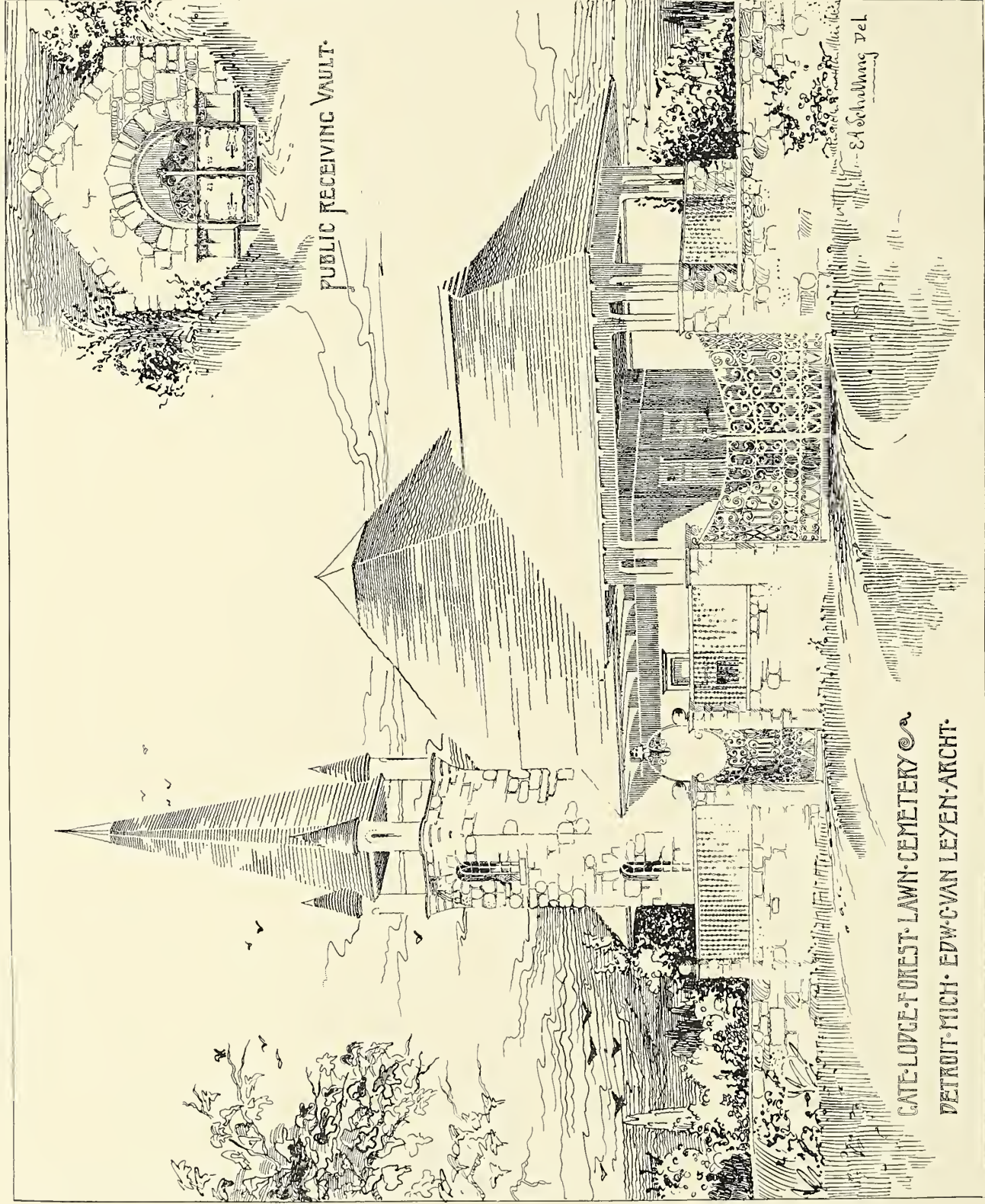
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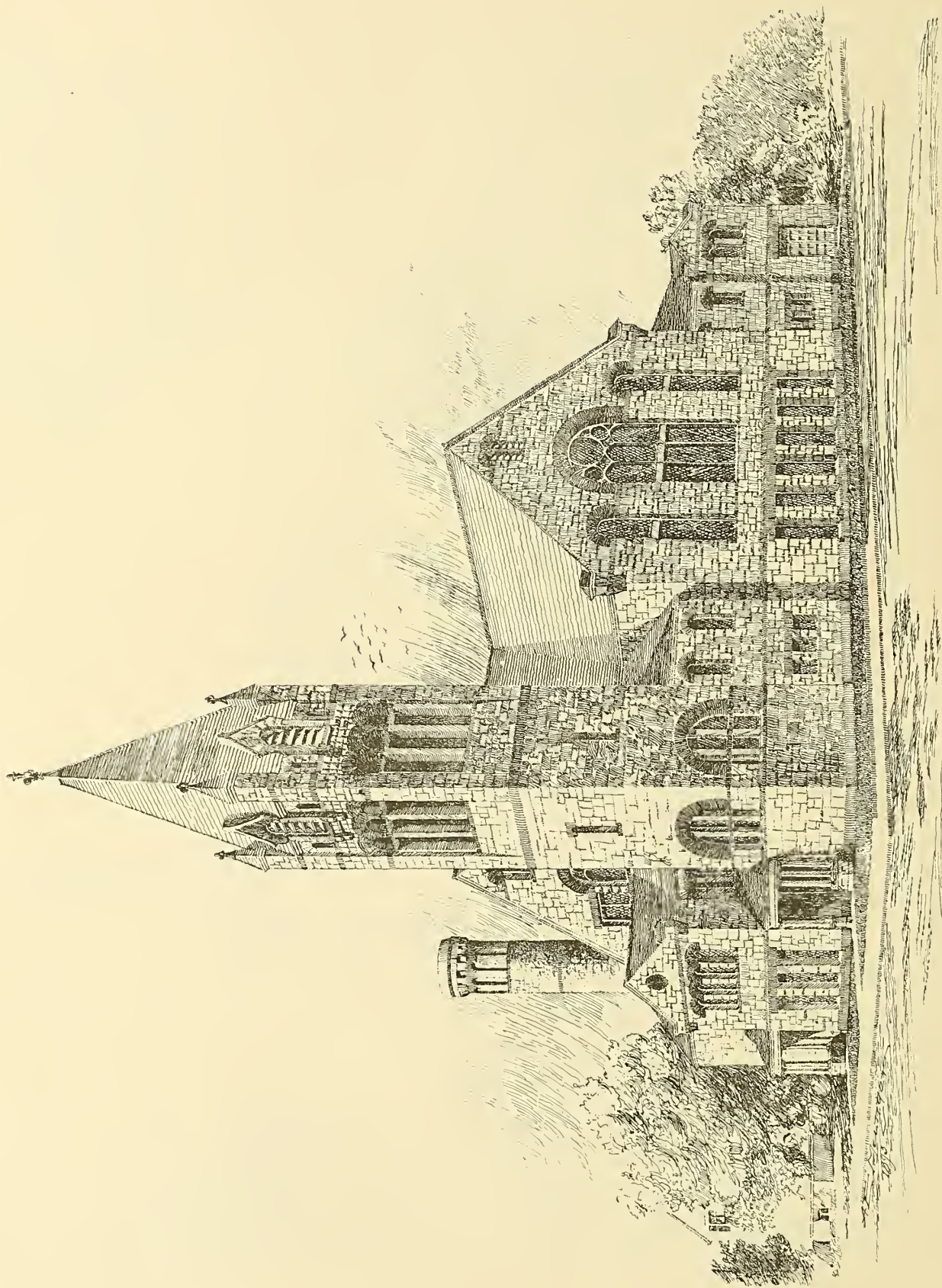
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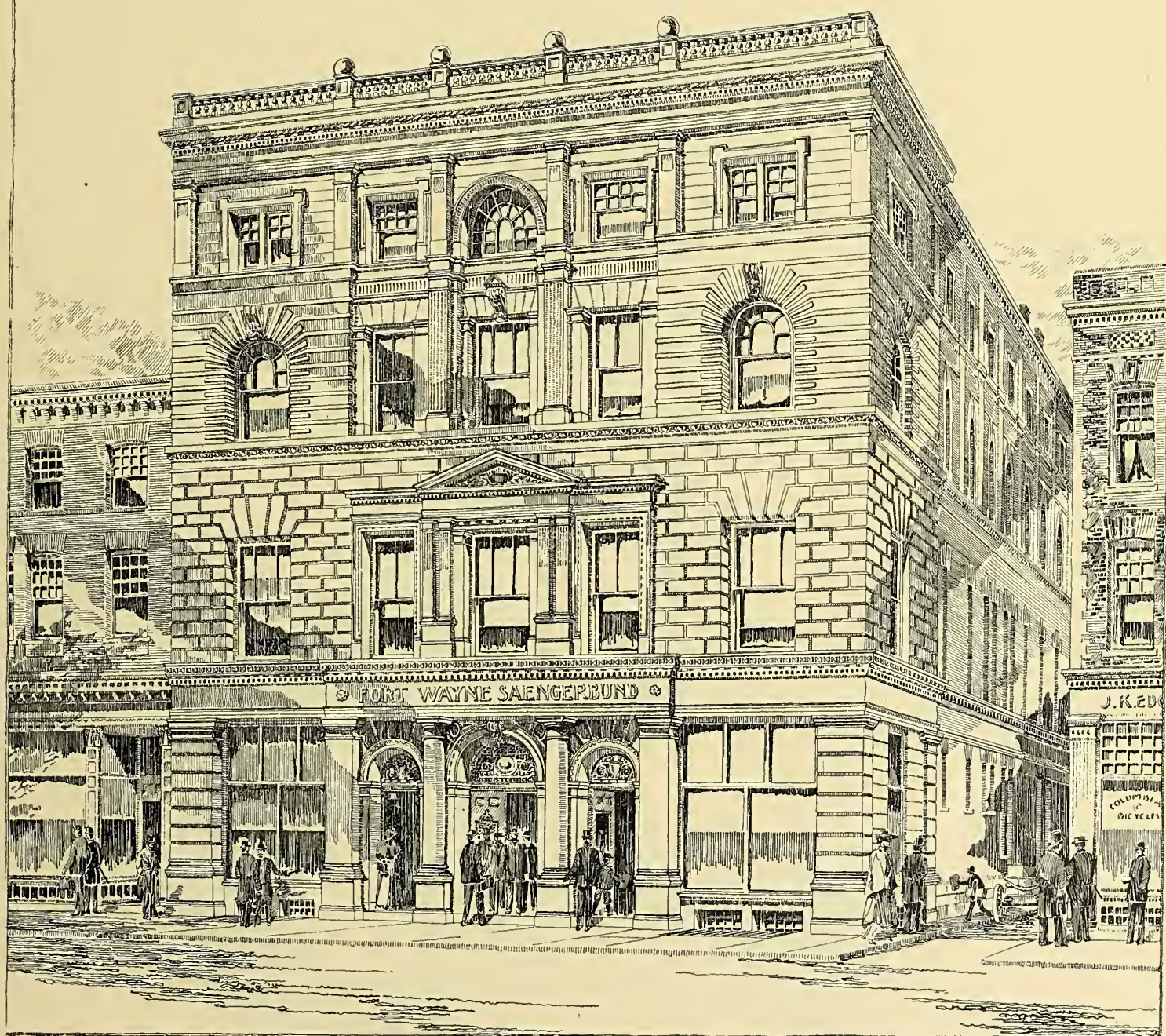
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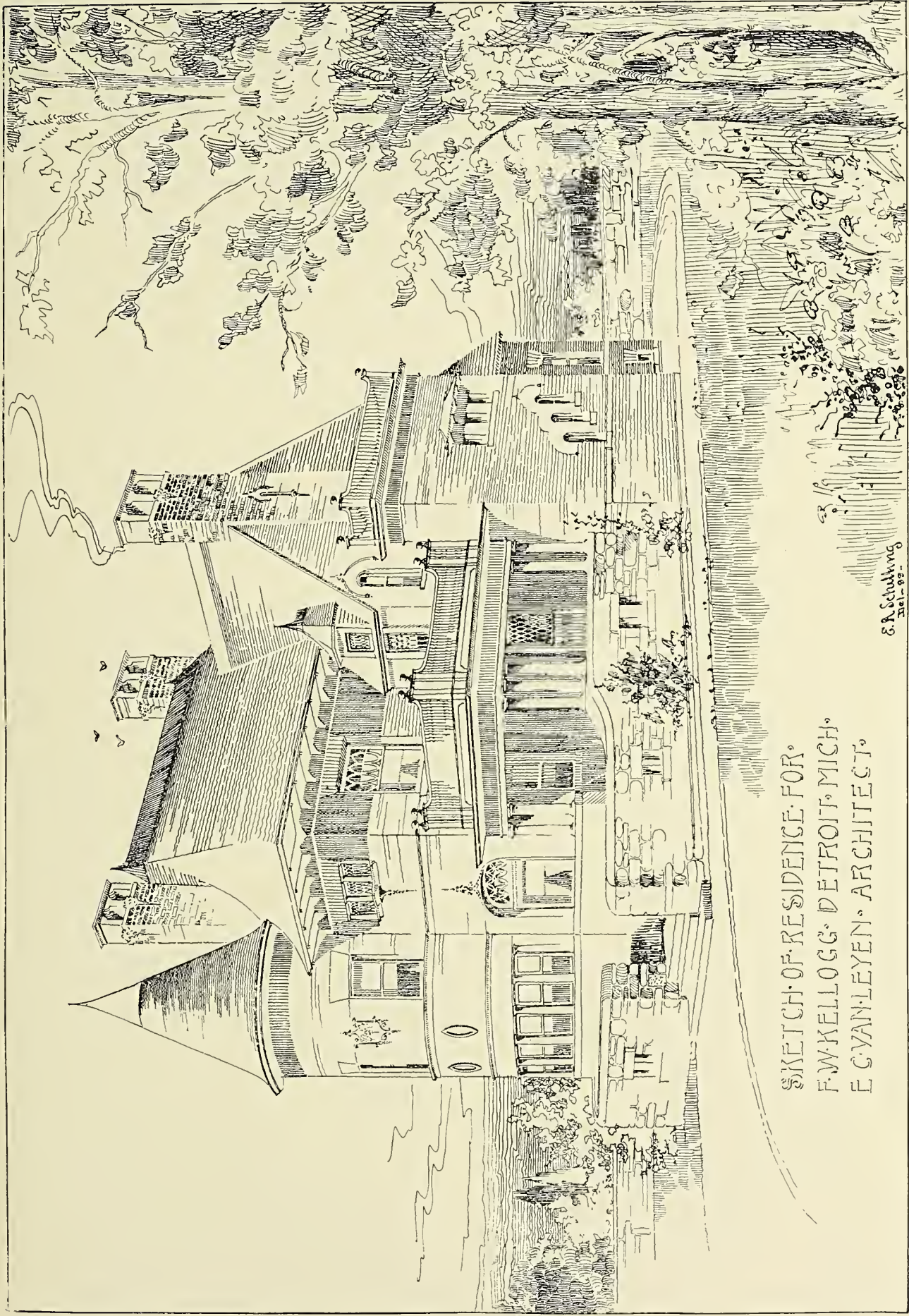
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Committee on Foreign Correspondence.—Richard M. Hunt, chairman, New York, N. Y.; William Le Baron Jenney, Chicago, Ill.; R. S. Peabody, Boston, Mass.; C. F. McKim, New York, N. Y.; Henry Van Brunt, Kansas City, Mo.

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Committee on Competition Code.—Charles E. Illsley, chairman, St. Louis, Mo.; J. W. Yost, Columbus, Ohio; J. G. Cutler, Rochester, N. Y.

Annual Meeting of Directors A. I. A.

The annual meeting of the board of directors of the American Institute of Architects will be held in New York on January 8. Because of the conditions existing at the time of the annual convention the deliberations of that body were brief and most of the current work was left to the meeting of the board of directors for consideration, and for this reason every member should be in attendance. The proposed and needed revision of the by-laws should receive attention as well as the several subjects suggested by President Kendall's address and the report of the former board of directors. The question of the relation of Chapters to the Institute has never been satisfactorily settled, and the directors at the coming meeting should examine carefully into the condition of each Chapter and its experience, so that a broad, equitable and attractive policy can be established for their organization and maintenance. While the high standard which the Institute seeks to maintain in its membership should be raised instead of lowered, the avenues to such membership should be made easy for practitioners through the local Chapters and in these an evangelical spirit should obtain. It is not alone from remote districts, where the two or three practitioners have the necessary standing but lack the acquaintanceship necessary to become affiliated with distant Chapters, from which the Institute could draw an increased membership, but in the large cities where the Chapters are strong and recognized. In every large city architects prominent in their profession have practiced for years, and have never been asked to join the local Chapter or the Institute. It does not seem to be anybody's business. This should be remedied, and it seems to be the duty of the board of directors to incorporate this matter in their consideration of the relation of Chapters to the Institute.

Necessary Work for Architects' Examinations.

Allied to the subject of membership is that of the examination and licensing of architects. Many state organizations have worked with greater or less earnestness to secure the passage of bills providing for such regulation of architectural practice. Down in Texas a battle was fought by a few earnest men, and after persevering effort was lost, not only because of the obtuseness of the average legislator in that state, but, we are afraid, because of lukewarmness of the majority of the architects themselves toward the measure. All the architectural world knows of the autocratic action of the governor of the state of New York last year, who vetoed a bill twice indorsed by both houses of the legislature. The work of those members of the Western New York State Chapter who secured its passage has never been fully appreciated because they failed. If they had been successful they would have been praised by every member of the profession. The work and the self-sacrifice were the same, and it might prove an incentive to others if such action in behalf of the profession should occasionally receive some marked approval by the Institute. It is thirty-five years since the first organization of architects was established in this country. It was little more than a local organization, yet it called itself the American Institute of Architects. Two years after its

organization written documents show that the conservatism of the members was such that it was a matter of doubt whether such things as competitions and commissions could with propriety be discussed in its meetings. It was found that even such conservatism as this could not keep the standard of the profession up to the dignity of its province, and now we know that nothing but the legal regulation of practitioners will. The bill for the reorganization of the supervising architect's office is referred to at length elsewhere, and this should by all means occupy the earnest attention of the directors at the annual meeting. In this year that has marked with so emphatic a record the commencement of a new architectural epoch it is proper that all old forms should be scanned and revised and new precepts established, so that the created may not eclipse the creator.

Government Architectural Practice Bill. As suggested last month a strong committee of the American Institute, representing the profession in the United States, should go to Washington early in January and

meet the representatives of the people in order that the bill for the regulation of government architectural practice may be placed upon its course to become a law during the present session of Congress. It is almost certain that with the same bill as that which was passed by the Fifty-second Congress, upon which Mr. Tarsney and his colleagues of the House Committee on Public Buildings and Grounds made so favorable a report, but little effort would be needed to secure this needed reform in government practice. The bill as approved by this committee and passed by Congress July 18, 1892, was presented to the Senate, and was referred by that body to its Committee on Public Buildings and Grounds in the following form:

Fifty-second Congress, first session, H. R. 9592, in the Senate of the United States, July 19, 1892.

Read twice and referred to the Committee on Public Buildings and Grounds.

An act authorizing the secretary of the treasury to obtain plans and specifications for public buildings to be erected under the supervision of the treasury department, and providing for local supervision of the construction of the same.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the secretary of the treasury be, and he is hereby, authorized in his discretion to obtain plans, drawings and specifications for the erection of public buildings for the United States, authorized by Congress to be erected under the supervision and direction of the secretary of the treasury and the local supervision of the construction thereof by competition among architects under such conditions as he may prescribe, and to make payment of expenses and for the services of said architects out of the appropriations for the respective buildings: *Provided,* That not less than five architects shall be invited by the said secretary to compete for the furnishing of such plans and specifications and the supervision of such construction: *And provided further,* That the general supervision of the work shall continue in the office of the supervising architect of the treasury department, the supervising architect to be the representative of the government in all matters connected with the erection and completion of such buildings, the receipt of proposals, the award of contracts therefor, and the disbursement of moneys thereunder, and perform all the duties that now pertain to his office, except the preparation of drawings and specifications for such buildings and the local supervision of the construction thereof, the said drawings and specifications, however, to be subject at all times to modification and change relating to plan or arrangement of building and selection of material therefor as may be directed by the secretary of the treasury.

Passed the House of Representatives July 18, 1892.

Attest:

JAMES KERR, Clerk.

On April 14, 1892, Mr. Tarsney submitted his report, which, in the light of the reception accorded the subject by former committees, was in more ways than one an extraordinary document. It showed that at last the representatives of the people were taking an intelligent view of this vital subject, and were not only disposed to make amends for former ignorance, but had studied the subject in all its bearings. The report commenced by reviewing the results obtained by the practice in vogue and the detrimental effect it had upon all public work. The high

character of the government buildings of Europe and the mediocre character of our own was noted, as well as the cost of public and private work in the United States, and the failure of the government to avail itself of the best artistic thought and most approved systems of construction, resulting in waste and extravagance as well as inadequate and unsightly structures for government use. The history of the office of supervising architect was reviewed and attention called to his inability to even see a government building in course of erection, much less have a hand in its designing. The length of time occupied in the erection of public buildings by the present method was cited, with examples, and the entire trend of the report was in denunciation of the old, and approval of the new, method as outlined in the bill which was recommended for passage. The total absence of any political aspect and the need for a general reformation of the system so long practiced should carry the matter to a successful issue if properly introduced by its champions, the representative architects of the United States.

**Christmas
the only
Universal
Holiday.**

It is an old saying that "Christmas comes but once a year," and while the present issue of THE INLAND ARCHITECT does not make pretensions to being a Christmas number, it will appear while the mistletoe hangs and the carols are being sung. It is a remarkable fact not often noted that Christmas day is the only universal holiday that is observed throughout the whole civilized world. The first day of the year is observed by nearly every nation, whether civilized or not, with some form of celebration. But there is a want of unanimity in the observance, for the reason that some races date the beginning of the new year from a different day to that noted in the usually accepted calendar. It is well known that in the sixth century the first Christian calendar was adopted, and that for a thousand years thereafter Christmas was the first day of the year. The first general observance of Christmas commenced at the first above-mentioned date, at which time it was a holiday throughout the whole Christian world, which included the greater part of the decaying Roman Empire and many of those countries by whose people it was subsequently overrun. For it is well known that the Goths, who inhabited the east of Europe, were Christians. Thus, during these thousand years Christmas was not only, as it is now, the most important Christian festival of the year, but was observed as a civil holiday. With the adoption of the new calendar in the sixteenth century, it having been found that there had been an error in the old one of four years and six days, the new year commenced a week later. But custom had been so long rooted that Christmas continued to be a civil as well as ecclesiastical festival, and still is. The civil holiday, recognized by all nations, has resulted in making the observance universal, and now we see the name of the founder of the Christian faith glorified everywhere, not only by those who believe in his word and mission, but by many who know nothing of it, and even by the descendants of those who persecuted him and his immediate followers. Whether observed by believers or not, it is by all hailed as the season when humanity breathes a spirit of "peace and good will"—or what is of equal import in a literal translation of the vulgate, which also agrees with the Greek version, "Peace to men of good will."

DIRECT METHODS IN ARCHITECTURAL PERSPECTIVE.

BY CHARLES E. ILLSLEY, A.M., C.E., ARCHITECT.

CHAPTER VIII—Continued.

MOST of the other points are readily found by repeating the processes already described; but should an attempt be made to trace the thickness of the walls throughout, additional expedients would become necessary. These are shown on an exaggerated scale in Fig. 121, where the outer boundary of an irregular plan is given, and it is required to draw in perspective the inner line throughout for a thickness of wall equal to A a. (Both S and Vr in this case are beyond the limits of the printed illustration, but in construction every normal was drawn toward S and every diagonal toward Vr.)

At the given point a, draw a normal to meet a diagonal A a'. The horizontal a' b' is the inner edge of the front wall. Draw the diagonal b' c; it meets A b in c, a point on the inner line

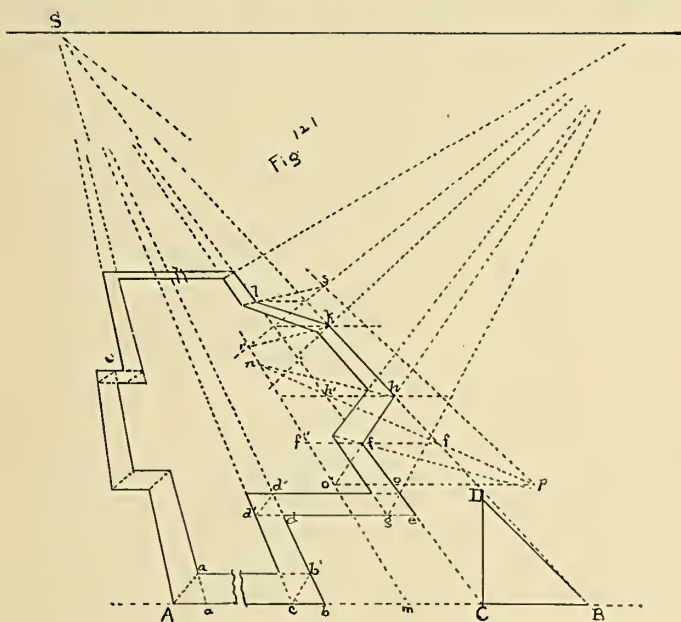


FIG. 121.

of the side wall, and draw an indefinite normal from c. Produce d e to the left to meet c d' in d', and draw the diagonal d' d''. Through d'' draw a horizontal, meeting c d' produced. Extend this line to meet e f. Through the last intersection draw a diagonal to meet d e in g, and draw an indefinite normal through g.

116. For the miter lines at the corners of the octagonal bay produce its end wall h k to meet A B in B. This gives B C, the true projection of the bay beyond the side wall. Erect the vertical C D = C B, and join B D. B D is the true length of the end f h of the bay. Now, the sides of the bay being at angles of forty-five degrees with the building line, h may be considered the corner of a regular octagon, and the miter lines at h and k will run to the center of this octagon, as will also a perpendicular to any side of the octagon at its middle.

Lay off in C = $\frac{B D}{2}$; draw the normal m r, and through f draw a horizontal f' f''. Since m C = $\frac{B D}{2}$, it equals one-half the true

size of f h. Now f' f'' is the perspective of m C, and f' f is perspective perpendicular to f' k; hence f' is the middle of one side of a regular octagon of which f h is the adjacent side; consequently, m f'' produced, which perspective is perpendicular to f' f, will pass through the center of the octagon. If through the middle of f h we draw a perpendicular to that side, its intersection with m f'' produced will mark the required center of the octagon.

Now by construction h h' f' is a perspective square, and f h is its diagonal; the other diagonal, f' h', is hence the perpendicular required; it bisects f h and meets m f'' at n, which is the required center of the octagon.

117. For the miter line at f, continue h f to meet m f'' at o', and draw the horizontal o' p to meet h' f' produced. The point p is the center of another octagon along the lines h f o, and f p is the required miter line at f. For, o' f being the diagonal of a square (in perspective), o f = f' f''. It has already been shown that f' f' is half of a side of a regular octagon corresponding with

f h; then, o f is equally the half side of a similar octagon, and o p, being perspective perpendicular with o f, crosses n p in the center of the octagon.

Floor plans are used in perspective only as accessory to the elevations, hence the precision above illustrated will not usually be required in perspective plan drawing. The expedients used, however, will have later application.

118. To find a standpoint where the angle of vision shall be exactly sixty degrees (Section 101) the construction shown in Fig. 122 may be employed. Draw to scale the outline plan A B C D, join its extremes A and B, and on A B draw the equilateral triangle A B d = a with its circumscribing circle.* Any point on this circle in front of A B may serve as the required standpoint, since lines from it to A and B make an angle of exactly sixty degrees.† Having selected such a point, as b, measure its distances A d, b d, to the same scale on which A B C D is drawn, and apply to the perspective sheet (b d being perpendicular to A B). Should b d, for example, measure one hundred feet, A d will measure nearly twelve feet, while A B will measure one hundred and forty-four feet. Hence a visual angle of sixty degrees from a distance of one hundred feet will embrace a large building.

119. PROBLEM VII.—To design an arcade, etc., without preliminary plans or elevations, Fig. 123.‡ Two vanishing points are used, namely: S beyond the limits of the illustration to the left, and Vr, equally "out of sight" to the right (Section 104). Their distance apart equals four times the width of the front A B. The horizon is at V V'. The plane of the picture coincides with the front wall A B (Section 97).

Select A B anywhere, at will, lay out the divisions b, c, d, e, and draw normals (Section 104) through all these points. The piers of the first story are to be square in section, hence g, where the normal b g meets the diagonal A g, is a point in the rear line of the front wall. Draw the horizontal g f. This completes the perspective plan of the front wall in the first story.

For the elevation select any desired line as a base and construct in the usual way a front elevation to correspond in the first story with the plan along A B below. To draw the first arch and pier

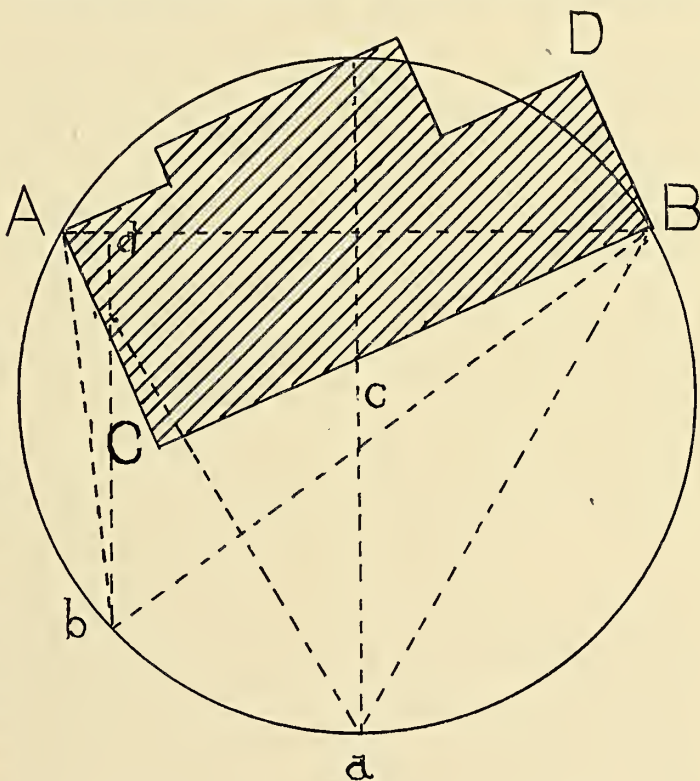


FIG. 122.

on the side wall, lay off on A B produced to the left A b' c' d', duplicates of A b c d, it being intended that the arches and piers in the side wall shall duplicate those in front. Draw an indefinite normal A C for the plan of the side wall and transfer to it by

* This triangle may readily be drawn on A B with the aid of the 60-degree triangle, the angles at A and B being of sixty degrees.

† In Fig. 122 A a B is an inscribed angle of sixty degrees. Every other angle inscribed in the same segment A b A B is also of sixty degrees, being measured by one-half the same arc A B.

‡ The following examples are solely intended to illustrate the direct methods of perspective. They are not presented as models in construction nor in design.

diagonals the distances $A b'$, c' , d' (Section 106). At v and u on the vertical corner mark the heights of the piers and draw indefinite normals through these points to designate the tops and bases of the piers in the side wall. From the points already found on $A C$ project vertical lines for the corner and second piers in the side wall.

120. For the first arch in the side wall mark on the corner v u , the height of the two rings (intrados and extrados) of the front arch, and draw normals for the same along the side wall. Carry up the vertical pier lines r and q to meet the normal for the intrados; draw cross diagonals $r p$, $o q$,* and from their intersections, which is the perspective center of the perspective rectangle $r o p q$, draw a vertical to meet the normal for the extrados. In the first front arch draw $c'' o'$ from the springing point of the arch to o' , the opposite upper corner of its circumscribing rectangle. Transfer the point o'' (where $c'' o'$ cuts the arc) to the

draw the normal $t t''$ to meet the diagonal $u t''$. Thence draw the horizontal $t'' t'$ to meet the normal $u t'$. The figure $u t t'' t'$ is a perspective square, hence $u t' = u t$. Had the outer arc in front been smaller or larger, so as not to pass through o' , its perspective could have been found by the method used for the inner arc.

122. One arch and two piers in the side wall have now been drawn. The others might be found by repeating the same procedure, but this would extend the line $A B$ inconveniently to the left. Another and more expeditious method will be used in drawing the other piers.†

The side wall is to contain four archways like those in front. First determine its length. In the front wall draw $v c'' v'$ to the center line of the right-hand pier, transfer the level v' to the corner at v'' , draw an indefinite normal through v'' and extend the slant line $v r$ to meet this normal. Since r corresponds with c'' , the intersection v''' corresponds with v' and marks the middle of

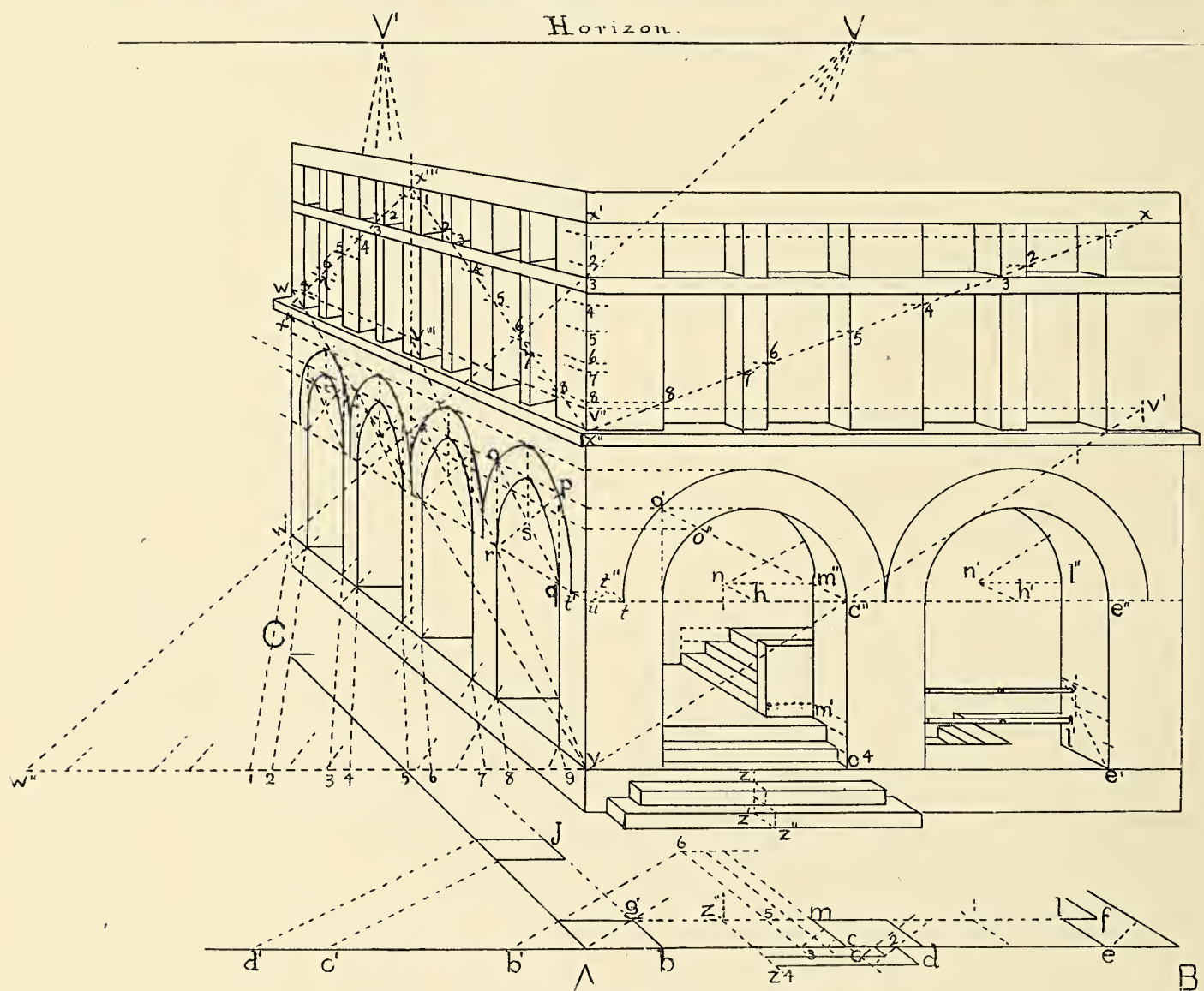


FIG. 123.

corner line $v u$, and draw an indefinite normal. The intersection of this normal with $o q$ and $r p$ gives points in the perspective semicircle corresponding with o'' , while the vertical from s meets $o p$ in the middle of the perspective arch. The inner curve is now sketched free-hand between these points, remembering that it must be tangent to the verticals at r and q , and to the normal at its top.

121. While this method, which locates but one intermediate point in each quadrant of the perspective circle, is serviceable for small arcs, and is, perhaps, more used than any other by artists, expedients for obtaining any additional points desired will be illustrated hereafter.

By accident the line $c o''$ happens to meet the outer arc at o' , where the vertical pier line produced meets the level of the head of the arch. Hence o and p in the perspective are points in the extrados. The vertical from s marks another point. To find t'

the side wall, $v'' v'''$, being perspective equal to $v'' v'$. Through v''' draw a vertical down to $v w'$; mark its center and through it draw a slant line from v . This meets the normal through v'' in w , which is the rear line of the wall, $w v'''$, being equal perspective to $v''' v'' = v'' v'$. Through w draw a vertical from the base line, to mark the rear corner of the wall.

123. The expedient above employed is of great service in perspective. The principle is as follows: The diagonals of a rectangle bisect each other as well as all other lines, as $C D$ (Fig. 124), which pass through their point of intersection a . The vertical right triangles $E C a$, $D a A$, being similar, $E C : A D :: a C : a D$. But $a C = a D$, hence $E C = A D = C B$. In the perspective $w v v'$ is a rectangle and v''' is a vertical through its center. Hence a line $v w$ drawn through the middle of this vertical will meet the top at a distance $v'' w = 2 v'' v'''$.

It does not follow that a slant line $A F$ through b at one quarter of $C D$ will meet $B E$ at one-half the distance $E C$. The tri-

† This should properly have been used for the entire arcade in the side wall except that it has been the aim to present a choice of methods.

* Since in these problems the term diagonal has a special meaning (Section 104), it will be necessary when speaking of other diagonals, as here, to use some qualifying word, as cross diagonals or slant diagonals.

angles $F C b$, $b A D$, being similar, $F C : A D :: b C : b D$. But $b C = \frac{b D}{3}$. $\therefore F C = \frac{A D}{3} = \frac{B C}{3} = \frac{E C}{3}$. To find where a slant from A will cross $C D$ so as to meet $E C$ in its middle at H , the point H must be located and $A H$ drawn accordingly. Then transfer the distance $C e$ by the dividers to the perspective drawing. Usually, however, simpler expedients will be available.

124. The perspective side wall being outlined it remains to subdivide it with piers and arches similar to those in the front wall, i. e., of the same shape and dimensions. Produce the base line $e' v$ of the front piers indefinitely to the left and on it lay off to one-half the scale used in the front elevation duplicate piers and spaces for four openings, as shown.* Join w'' , the corner of the last pier, with w' , the end of the perspective line marking the base

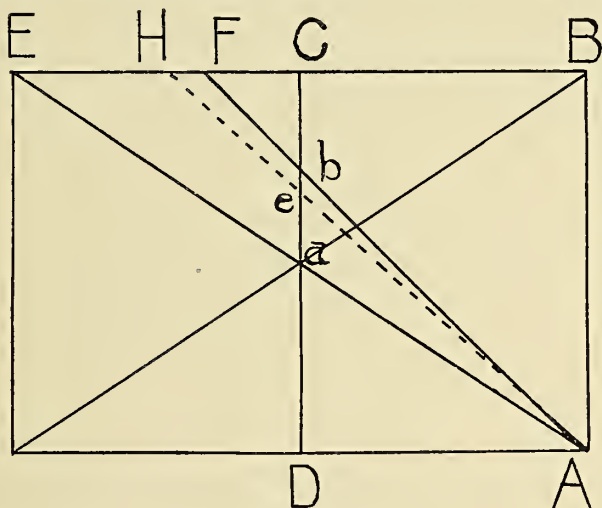


FIG. 124.

of the piers, and produce $w'' w'$ to the horizon at V . From V as a center draw lines to all the divisions in $v w'$. These lines cross $v w'$ in the required points for the perspective piers, through which verticals are drawn as shown. It will be remarked, incidentally, that the points found by this method for the first opening and its piers coincide with those previously found by another method. (See Section 116.)

The piers being located, the arches over them are drawn by the same process as with the first arch. (See Section 117.)

(To be continued.)

PUBLIC COMPETITION OF ARCHITECTURE.†

IN general, competitions in France are open to all French architects, although sometimes the artists of a certain department only are admitted, for the praiseworthy reason of favoring the department architects; but if it has its advantages it has also its inconveniences, and it is only in considering the special circumstances of a given competition that a wise decision can be reached. The inconvenience is immediately seen in thus restraining the competition; it is a loss of a contingent of happy and varied ideas.

Competitions of two degrees evidently produce more elaborate works, since after a first selection the best plans have had a new and deeper study. Thus it is understood why the administrations willingly adopt the system, but its practice gives rise to very delicate questions.

In the first place, the competitions of two degrees, requiring more work on the part of the artist, should be paid more; the administration receives in reality a double preliminary study; it should devote to this double study a double credit. On the other hand, it is necessary that this competition be organized with such care that in its successive phases the competitors be placed throughout in conditions of complete equality and sufficient guarantee; for this rigid rules are necessary. The preparatory competition should not be exhibited; it should be judged by elimination and without classification of the chosen plans, and the principle of publicity of the acts of the jury should be respected. Consequently, all the plans should be kept under seal after the preparatory judgment in order to allow a general exhibition of all the sketches and study of the projects at the moment of the definite judgment.

As to the discretion of the juries, it is there especially that it is indispensable as a moral rule of utmost importance.

Should plans sent in competition be signed or anonymous? This question is decided differently by administrations. Most frequently the anonymous is required, admitting only the device in

a sealed duplicate, to be opened after the judgment and for rewarded plans alone. The city of Paris, on the contrary, and some other administrations, require signed projects with a notice from the authors of their title and their works, etc.

It must be admitted the secret of competition is never a complete secret for all the members of the jury, and surely entire publicity of names is better than an imperfect secret, which constitutes a danger of favoritism with the appearance of impartiality.

But there are artists, and those not the least, who will consent to enter a competition on the sole condition that their failure, should it occur, be kept secret. The obligation of the signature turns them from the competition, and also may encourage the production of projects which are only the work of an agency under the signature of a simple money lender. This is, indeed, one of the evils of public competitions.

With an object too easily understood, projects are often seen in the exhibitions of competition, the official paternity of which is attributed to one who has never touched a pencil.

Nevertheless, the inconveniences of anonymous productions appear the most serious; perhaps, in view of these contradictory difficulties, the wisest course would be to give entire liberty to competitors.

The rewards of the competition are themselves very variable. Sometimes the programme insures the work to the best project; most frequently it gives only premiums and reserves the question of execution. Often even premiums are not guaranteed and depend upon the jury.

This last condition is really inadmissible; then it is for the administration a strict obligation to devote to the rewards of the competition the funds placed at its disposal for this special purpose, and it remains only to determine the relative and not absolute value of the exhibited projects. This is all the more true inasmuch as the *ensemble* of a competition is always equal in value to the programme, that a good programme gives always a good competition, and that, if the competition is virtually sterile, it is that the programme was not susceptible of solution, which happens more frequently than is supposed.

The fact must be emphasized that the administrations do not sufficiently realize that a competition should have a special fund, that this allowance should be large enough to interest the competitors it enlists.

Recently, the town of Vernon, for a town hall valued at \$60,000, allowed a premium of \$100; this is derisive. On the contrary, the Roumanian government, for each of its competitions of the palace, of the Senate and the Chamber of Deputies, guaranteed premiums of 50,000 francs, 7,000 and 3,000 francs.

This intelligent liberality gave very interesting competitions, from which surely important profit will be derived.

As to the work being guaranteed to the best plan, it does not pertain to architects to criticise this point. Besides, it is rare that this decision is made in advance absolutely, except for competitions purely decorative, when the programme does not admit of all the modifications required by the study of the complicated details of a plan of distributions.

It must certainly be admitted that a promise on the part of an administration would scarcely be prudent; too many reasons of age or of distance, of health, of antecedents, even the question of honorability, prevent the author of the best project from filling the rôle of constructing architect.

But, specially, the reason which might decide the administration to combine the privilege of execution with the competition proceeds most frequently from this same illusion, which consists in believing that competition can give a definite project. It is legitimate and often desirable that the author of the best project, if it shows the requisite qualities, should be given charge of the work; but this privilege should then be understood purely in this sense, that, honored with a reward higher than the simple premium, he is named architect of the edifice to be built; the administration, enlightened by the competition and information received, makes thus a happy choice; but that does not mean that the project will be executed without modifications and without ulterior studies with a view of improving it.

Here again the question should be clearly governed by the rational principle of competition; the competition remains a preparatory operation, distinct and special; following it, the administration selects as architect of the future edifice the laureate of the competition; the phase of the execution commences then, distinct and entire.

Finally comes the last operation of the competition, its epilogue, and its sanction, the judgment. The question here is practically grave and arduous; too many competitions are perverted by the judgment, not from want of equity and good faith, but want of proper direction and competent judges.

And first, what should be the spirit of this judgment? A word in answer is sufficient: Justice. That seems evident, and yet it is contested.

Frequently in judgments of competitions this opinion is held, that the interest of the city or the department must be considered above all, and that, if the competitor has convinced the jury that a better result may be obtained by setting aside the programme, the jury itself should also discard the programme and accept the apparently happier solution offered.

It cannot be too often repeated that this is dishonest. A competition is a bi-lateral contract where the programme is absolutely the law of the parties.

An example will show the justice of this statement: In 1880 the city of Paris opened a competition for the decoration of the

* These are the divisions from v to w'' which are not figured.

† Written by Mr. J. Gaudet, vice-president of the Central Society of French Architects, and presented by F. Adolph Bocage, delegate of the Central Society, before the World's Congress of Architects, Chicago, August 4, 1893. Continued from page 28.

Square of la Republique. By strange agreement, the staffs, the rostral columns, the candelabras, the balustrades, were placed in separate competition, that is for all or for only one of these distinct subjects. At the judgment, the Director of Works declared that the interest of the city certainly required an *ensemble*, and consequently asked that the jury give preference to plans which treated all the subjects; this was evidently correct, but too late. One of the jury selected by the competitors called attention to the fact that such a decision would throw out artists who, on the faith of the programme, had only sent one or two or three subjects, and that would be unjust; the prefect acknowledged the correctness of this observation, declaring that the programme had been badly conceived, that the administration was in error and, in fact, on one of the subjects, the staffs, the prize was given to an artist who had treated this subject only. Such is the only just principle. If the competition shows that the programme is imperfect, the administration can see to it later; but, as to the judgment, the jury is bound by the programme as a court is bound by the law; it is not a question of expediency, but of justice.

How should the jury of a competition be composed? Reason answers: Of competent men. That seems evident; the same as in judging a competition of mathematics, none but mathematicians are employed as judges. And yet the contrary almost always happens. In juries of architecture few architects are seen; always a majority of incompetent judges, whatever may be their value in other respects. From whence comes, then, the strange anomaly. Always the same false idea of the character of the competition and a sort of adjudication of a particular nature. If, indeed, the judgment of a competition had the character of a bargain, the jury would be without right to pronounce a decision which legally can only be taken by the administration; but, competition being what it should be, the proposition of ideas, the judgment being what it should be, the choice of the best ideas, then it is the competent jury which alone is qualified to decide; also, it must be positively stated that a jury must be composed exclusively of architects, the most experienced. This jury may obtain all necessary information from the interested functionaries, but only in consultation, then decide absolutely. After which, the competition being concluded, the period of execution will begin. Then will follow administrative action, each one will fill his natural rôle, and no more hybrid juries will be seen. Judgment indeed will have that weight which only the certainty of the wisdom of the judges can give.

There remains the difficulty of choosing the experienced architect as judges of the works of their *confrères*. Three systems are in turn employed: the direct designation of juries by the administration; the delegation by competent bodies; the election by the competitors. This last method seems the most liberal, but it presents a great difficulty in the method of obtaining for those elected an absolute majority. The competitors must necessarily all be present at a first and a second scrutiny; this is scarcely possible for an anonymous competition and becomes impracticable when the concurrents live at a distance.

A vote by correspondence and a relative majority is therefore obtained, leaving a minority which can concert together, and become the masters of the election.

The direct appointment of juries by the administration is evidently contrary to principle; the jury should be neutral and impartial, above all suspicion, wholly independent. Certainly these qualities can be found in juries thus selected, but their personal honorability itself would not place them beyond the suspicion attached to the defective origin of their nomination. This mode of composing a jury should, then, be avoided as contrary even to the spirit of competition. As to the obligation by competent bodies it presents all desirable guarantees; these delegations have been requested at the Academy of Fine Arts, at the General Council of Civil Construction, at the jury of the School of Fine Arts, at the Societe Central of French Architects. Sometimes at one or the other simultaneously.

It is evidently, of all possible methods of nomination, the one which raises the least objection, and which deserves to be recommended.

Such is the general exposition of the theoretical ideas suggested by the question of public competitions.

It is evident how little, in reality, this question has been studied, and the result is often confusion and contradiction. There is evidently a method which is the best, and should be applied everywhere by all the administrations, it is only necessary to know it. It would be a very useful result of an act of government to form into a code the rules which should govern the preparation, the execution and the judgment of public competitions.

The preceding study will facilitate the drawing of the rules to propose for this end.

THE annual dinner of the Chicago Architectural Sketch Club occurred November 27, and was attended by about eighty club members and friends. The president and a number of members of the Chicago Society of Artists were guests. The officers for the year, elected at the previous meeting, were announced as follows: President, Hugh M. G. Garden; first vice-president, Stephen M. Wirts; second vice-president, Alfred R. Schlesinger; secretary, Edward G. Garden; treasurer, E. J. Wagner; executive committee, the officers and F. L. Linden and Edgar S. Belden. At the meeting on December 12 it was announced that the next meeting of the club would be postponed until after the holidays. The selection of subjects for the syllabus for next year was placed in the hands of the executive committee.

ROBERT CLARK MEDAL COMPETITION.

AT the rooms of the Chicago Architectural Sketch Club, on November 28, the fifth competition for the Robert Clark testimonial was exhibited, the occasion being the annual banquet of the club. The competition was for an elevated terminal station and the competitors were thirty in number, presenting 154 drawings, the largest number presented in any of these competitions. The names, *noms de plume* and location of the competitors are as follows:

NAMES OF COMPETITORS.

"Columbian," Theo. Livingston, Chicago; "Crescent," C. A. Heruan, St. Louis; "Badger," F. J. Voith, Milwaukee; "R. C. T.," William A. Hirsch, St. Louis; "Shield and Circle," John F. Jackson, Buffalo; "All Aboard," George G. Will, Omaha; "T Square and Triangle," W. W. de Vaux, New York; "Fifth," Alexander Sandblom, Pullman, Illinois; "Greek Letter," A. C. Lotz, Chicago; "Fecit," A. C. Berry, Chicago; "Expedient," Edgar O. Blake, Chicago; "Two Deer and Shield in Circle," H. W. Jackson, Saginaw, Michigan; "Honoris Causa," Adolph Schaber, Chicago; "Eagle," A. L. Harris, Chicago; "While There's Life, Etc.," T. S. Holmes, New York; "Marquinta," R. Mildner, Detroit; "N. G.," G. W. Andrews, Cleveland; "Finis," John Richmond, St. Joseph, Missouri; "Motto 1 \$," John Gettel, Cincinnati; "Rectus," H. K. Holsman, Chicago; "Motto 2 \$," F. M. Garden, Chicago; "Nil Sine Studio," J. G. Link, Chicago; "Classic," J. W. Johnson, Chicago; "R. C. T. on Red Banner," H. M. G. Garden, Chicago.

The prize winners were as follows: Gold medal—"Fraternity," W. Pell Pulis, St. Louis, Missouri; silver medal—"Greek," Francis L. Norton, Staten Island, New York. Bronze medals in order named—"L," Ben W. Trunk, St. Joseph, Missouri; "Ace of Spades," E. G. Garden, Chicago; "One of the House of the Craft," M. P. McArdle, St. Louis. "Two Deer and Shield in Circle," H. W. Jackson, and also "Finis," John Richmond, were specially commended by the committee.

The report of the Adjudicating Committee is as follows:

REPORT OF COMMITTEE.

November 9, 1893.

Hugh M. G. Garden, Secretary, Chicago Architectural Sketch Club:

SIR,—The Adjudicating Committee on the Robert Clark Testimonial, consisting of W. L. B. Jenney, Chairman; S. A. Treat, Charles A. Coolidge, Lorado Taft and D. H. Burnham, have had several meetings, and have carefully studied the numerous designs presented in competition.

On November 7 ballots were taken as follows: First ballot for the three best designs in order of merit:

Mr. Treat—First, "Greek"; second, "Fraternity"; third, "Ace of Spades."

Mr. Coolidge—First, "Fraternity"; second, "Greek"; third, "R. C. T. in a Triangle."

Mr. Taft—First, "Fraternity"; second, "Greek"; third, "R. C. T. in a Triangle."

Mr. Burnham—First, "Greek"; second, "L"; third, "Finis."

Mr. Jenney—First, "Fraternity"; second, "Greek"; third, "L."

From the foregoing ballot the gold medal was awarded to "Fraternity."

The silver medal was awarded to "Greek."

The second ballot for the third place: Mr. Treat—"L"; Mr. Coolidge—"L"; Mr. Taft—"L"; Mr. Burnham, "Finis"; Mr. Jenney—"L." The bronze medal was awarded to "L."

Third ballot for the two honorable mentions: Mr. Treat—"Ace of Spades" and "One of the Craft." Mr. Coolidge—"Ace of Spades" and "One of the Craft." Mr. Taft—"Ace of Spades" and "Finis." Mr. Jenney—"Ace of Spades" and "One of the Craft." Honorable mention was awarded to "Ace of Spades" and "One of the Craft."

Before critising the designs separately, the committee wish to make this general criticism on the designs submitted:

There is no design which is markedly superior to others in both plan and elevations, all having some serious defect in either the one or the other. The essential features of the plan should be an abundance of light and the greatest facilities for passing from the street, by a convenient ticket office and gate-keeper, to the trains, and a careful separation of the people descending from the trains from those coming up; if these conditions are not fulfilled, the station can never be a success. Many of the designs which otherwise have merit were thrown out for want of attention to this one fundamental principle, or for lack of adequate arrangements to insure its working with large numbers of people. There also seems to have been a decided tendency in the majority of the designs to introduce a tower or towers, whether it went with the style of the building or not. In some cases they might be left off with good effect, and in others the style of the tower differs from the style of the building to which it is attached.

The following are the designs to which the committee have decided to award the medals and honorable mentions:

Gold Medal to "Fraternity." The plan in main is good and has the merit of recognizing the necessity of having as many and convenient entrances and exits as possible. It has one very grave fault in that the light of the ground floor is sacrificed to the exterior effect of the outside steps. The light in the second story, as shown in the section, is limited to a small space in the center, and should be more diffused. The exterior is too monumental, and reminds one somewhat of a statehouse. The large column with Victory on top in the middle of the exterior staircase is inappropriate besides being in the way. The arched windows which light the third-story offices are too low in the room to give sufficient light. The subdivision of these windows could be improved. The side elevation is the best part of the whole design, having simplicity and proportion. The building, however, hangs well together as a whole, and shows intelligent study.

Silver Medal to "Green." This plan is well laid out, the staircases on either side being well disposed and serviceable. The whole arrangement is practicable, simple and serviceable. The front elevation in itself is good, but the perspective (unrendered) and side elevation show an indecision and lack of study in carrying out the building as a whole in the style and feeling of the front. The committee recommend that the section and perspective be completed to allow of publication, as the whole scheme has great possibilities if worked out intelligently with the proper feeling.

Bronze Medal to "L."—The plan, which is good in the main features, is greatly confused by the too prominent rendering of the mosaic. The lobby on the ground floor is dark, and light is sacrificed to the carriage approach and totally excluded from the small office on the right of entrance on ground floor. The elevation and perspective are well drawn and rendered, and are harmonious, but in a style which is adapted to certain localities only.

Honorable Mention to "Ace of Spades."—The plan is good, and entirely different from any of the above. The cutting up of the exterior stairs is not as good in elevation as in plan, giving the front an unquiet feeling. The side elevation gives undue importance to the train shed, which is higher than necessary.

Honorable mention to "One of the House of the Craft."—The plan is defective in the vital point of staircase, which is too small and not well

arranged. The exterior is simple, original and well rendered, although the tower seems unnecessary, and might come out of the building anywhere else as well.

The committee wishes to commend the rendering of the perspective submitted by "Two Stags Holding a Shield in Circle." Also for the perspective submitted marked "Finis." This latter is a drawing of great merit that we will be pleased to see in possession of the Sketch Club, framed and hung upon their walls.

To the report of the committee was appended the following decision in regard to the gold medal in the competition of last year:

Hugh M. G. Garden, Secretary, Chicago Architectural Sketch Club, 913 Masonic Temple Building, City:

Sir,—Pursuant to your request we have examined the two designs submitted in competition under the mottoes, "Classic" and "Fifth," in reference to deciding which of the said two designs should hold the first place.

We are informed that this is for the purpose of deciding to whom last year's gold medal is to be awarded, the authors of these two designs having last year jointly submitted a design that won the gold medal, and that it is agreed that the one to whom is awarded first place in this competition should receive the medal.

We have carefully considered these two designs and unanimously agree that the design submitted under the name of "Classic" should be awarded first place, it being, in our opinion, the best of the two in plan, in elevations, and perspective, and also in the rendering of the work.

Respectfully submitted,

THE COMMITTEE.

The principal drawings in the competition have been sent to New York for exhibition, and will on their return be published.

OPENING OF THE NEW ART INSTITUTE, CHICAGO.

THE new Art Institute Building on the Lake Front Park, foot of Adams street, is one of the first fruits that Chicago has gathered from the World's Fair. But for the Columbian Exposition having been held in Chicago, it is not probable that the Art Institute would be where it now is. The agitation of the Lake Front site for the Fair, and the retention of a nominal control of the Lake Front by the directory of the Exposition after it had been decided to locate it in Jackson Park, left a residuum in all-potent public opinion. This was that the Lake Front, still looked on as the "Gateway to the Fair," or more literally as the main station of the Illinois Central Railroad and the only practicable starting point for boats, should bear some part in connection with the great show. The necessity for a location for the International Congresses, which were to continue six months, apart from the attractions of the Fair and near the center of the city, was felt. The officers of the Art Institute, with their usual business astuteness, took in the situation at once. They started a scheme for the erection of a new building on the site of the old Interstate Exposition, which after exhausting all their other means and the proceeds of the sale of their old property to the Chicago Club, would show that just \$200,000 was lacking to complete that part of it which was needed for immediate use. This was just about the extreme amount of rental value of the property for business purposes in the center of the city. The Exposition was induced to contribute this amount, and the scheme, after all legal objections had been set aside, was perfected. The building was erected in a remarkably short period of time, the temporary halls of Columbus and Washington were built in the court for the larger assemblies, and the permanent Art Galleries were used for the smaller ones, and (nothing connected with the Exposition management being complete without a money-making concession) a restaurant was installed in the basement. The orators of the congresses battled in the halls of Washington and Columbus for six months in vain against the noise of the Illinois Central Railroad, and the smaller meetings stifled through the hottest summer known for years, under the skylights of the picture galleries. But as they came in relays, each congress becoming fully aware of this only by the time that their last sessions were closing, little complaint was made. The press did not complain because the people who did not hear the speeches only had their appetites whetted by the dumb show, and bought the papers greedily on the next day. The congresses came to an end, but the Art Institute accomplished what it set out to do. Only a little more than a month served for the removal of the temporary halls and putting the building in order, and the structure as far as completed was thrown open to the public on the 8th of this month.

The building is now quite complete as far as it goes, and is in the form of a letter E. The main front is on Michigan boulevard, and the two arms run back from the street the full length that they are intended to go, while the staircase hall, with its temporary iron stairs, occupies the center. The completed plan contemplates carrying the staircase hall back to the rear line and terminating it with an apse somewhat like the *Hemicycle* of the Academy of Fine Arts at Paris. The rear of the court is to be inclosed somewhat similar to the front. There will thus be formed two courts, made by dividing the present large court, which is open to the east. In each court will be a low building, to be used as a lecture hall, and these will be connected with the central hall, running east and west. In this will be the grand staircase. The exterior of the building is complete except the sculptured groups for each side of the entrance and the filling of the pediment, the models for which have been made by Philip Martiny, of Chicago. The building was designed by Shepley, Rutan & Coolidge, of Chicago. The floor plans are published on illustration pages.

The fruits of the great Exposition, besides the \$200,000 necessary to put the building into the present form, are several paintings that have been purchased by individuals and presented to the Institute, several bronzes, a large number of works of French sculpture in plaster, and the bronze replicas of Pompeian works from the Museum of Naples, which were exhibited in the Italian

section. The latter were presented by Harlow N. Higinbotham, president of the World's Fair Columbian Exposition. Besides these, part of the Collection of Casts of French Architectural Monuments, that occupied the east nave of the Art Palace, have been moved to the new building. These are known as the Trocadero Collection, being duplicates of casts in the Trocadero. They all belong to the Institute; but there is not yet room enough to place them; and the larger pieces may remain in the care of the Columbian Museum at the Art Palace until the Institute building is completed as designed.

As at present arranged the first story is almost entirely occupied with casts of sculpture, which form a very good historical collection from the archaic work of Egypt, Assyria and Greece down to the modern French school. In fact, the Institute is more rich in sculpture than anything else. On this floor, the northeast room (No. 15) has been fitted up as an art library. This also contains the main part of the collection of carbon photographs by Braun & Co., of Paris, known as the "Mrs. D. K. Pearsons collection," and presented by her husband, Doctor Pearsons, of Chicago. At present there are about eight thousand in the building, but there will be eventually double this number, as Doctor Pearsons has ordered all the photographs that the Brauns make. These comprise copies of both ancient and modern pictures and sculptures from nearly all of the great galleries of Europe. The long north room on the first floor (No. 14) is temporarily for lectures, and the walls are hung with the reproductions in color of early Italian paintings and architecture by the Arundel Society.

On the second story—the rooms here being all lighted from above—the northeast corner room (No. 25) contains an exhibition of the work of the Institute schools, the same that was in the Liberal Arts section at the Exposition. The two adjoining rooms (26 and 27) contain engravings and photographs. Room 28 contains the Ryerson-Hutchinson collection of ancient metalwork, mostly reproductions from the South Kensington Museum. Room 30, the southwest corner, is filled with a miscellaneous decorative art collection, mostly loaned, that was in the old building. Room 31 contains the Higinbotham collection of Pompeian bronzes from the Exposition. Room 32 contains Greek and Egyptian antiquities, mostly pottery. The Central Hall, over the entrance hall, contains modern sculpture, among which is the group from the Exposition by Daniel C. French, of Boston, called "Death and the Sculptor," being a memorial to Milmore. The remaining part of the second floor, the whole north end, is entirely given over to paintings, most of which were exhibited in the old building. Most of the pictures of Room 39 are a loan collection, among which is Rosetti's "Beata Beatrix."

The basement, which on all except the west side is entirely out of the ground, on account of the park being graded off to the east, will eventually be used as studios for the Institute schools, which are still in temporary quarters on Wabash avenue. At present only the architectural class has been moved to the new building.

CHICAGO SCHOOL OF ARCHITECTURE.

THE Chicago School of Architecture is the name given to the combined enterprise of the Art Institute and the Armour Institute. The Architectural School of the Art Institute has been in existence for four years past with such success as the facilities at its disposal and the employment of the best technical assistance warranted. But the want of means and room for that part of a young architect's education which is purely scientific has been felt from the start. This has been supplied by the newly organized Armour Institute, which has all the facilities to that end. So that instead of each attempting to give imperfect instruction as a whole, each now furnishes what the other is deficient in. The result is practically a new school under a new name, the emoluments and expenses of which are shared equally. In its practical workings, as far as now developed, the students attend at the Armour Institute in the mornings, and at the Art Institute in the afternoons, and enjoy a short interval of fresh air, necessitated by a journey from Thirty-third street to Adams street.

The school opened as per schedule on September 14, with twenty-five pupils, the number of which has now increased to thirty-three. The Armour Institute was ready at the appointed time, but the Art Institute was obliged to accommodate the classes in the temporary location at 302 Wabash avenue until October 16, on account of the occupation of the new Memorial Art Institute building by the World's Congress Auxiliary of the World's Columbian Exposition. On the last-mentioned day they were moved to the permanent quarters on the south side of the third floor of the new building. This is an L-shaped room, with north and east light placed over the second-story corridor, and accommodates about forty students at drawing-boards. The opposite side of the building will accommodate an equal number when ready.

The instruction at the Armour Institute will comprise geometry reviewed, descriptive geometry, French, physics, advanced algebra, trigonometry and shades and shadows in the first year; analytical geometry, chemistry, French, general construction, perspective, differential and integral calculus and geology in the second year; mechanics (analytical), graphical statics, stereotomy, strength of materials and surveying in the third year; and architectural engineering and architectural jurisprudence in the fourth year. The instructors of the Art Institute will give the purely artistic instruction in drawing, designing and coloring, as well as the historical and ethnological branch of architectural study. The course is outlined as follows: Freehand and instrumental drawing, study of the five orders, shading in monochrome, use of

water colors and problems in architectural design, in the first year; the same, including pen-and-ink work and original architectural design, in the second year; the same, including history of ornament and composition of ornament, in the third year; and original architectural design, composition of ornament and theses, in the fourth and last year. There will be lectures at the Art Institute on the following subjects: The history of architecture, theory of design, general construction, sanitary engineering, history of ornament, original architectural design, composition of ornament and specifications and estimates. This is as far as the full course of study extending over four years has been formulated. The old course of two years, which was formally inaugurated by the Art Institute, will be continued for such students as desire it.

The faculty of the Fine Arts branch of the school was as follows: William M. R. French, director; Louis J. Millet, professor of architecture; — Shattuck, assistant professor of architecture. Lecturers—William A. Otis, history of architecture; W. S. MacHarg, sewerage and ventilation; Irving K. Pond, theory of design; W. L. B. Jenney, construction; Wilber M. Stine, electricity.

Thus it will be seen that after several years of tentative work Chicago now has a fully equipped school of architecture, in well appointed buildings, which will count among the many triumphs of the Columbian year. The school aims at the complete education of the architect by a four years' course, without regard of office practice. It takes a pupil and teaches him the elements of architectural drawing, presuming some knowledge of freehand drawing and elementary mathematical studies. It is the same training that a man who is not a law clerk can obtain in a law school. It presupposes that the actual training will follow, and that the fuller knowledge will be gained afterward by experience. The school already has several grades of scholars, and three women students. Several draftsmen of experience have already entered the classes to obtain a theoretical training. They are part of the large number of unemployed who are unable at present to obtain work, and are fortunate enough to be able to incur the expense of tuition. The cost of this in the new school is \$25 per term, or \$75 per annum. Detailed information may be obtained by addressing W. M. R. French, director, at the Art Institute Building, Chicago.

OUR ILLUSTRATIONS.

Entrance to the Alamo, San Antonio, Texas. Albert Levering, del.

The Equitable Building, Chicago. Holabird & Roche, architects.

Barn for C. T. Power, Helena, Montana. Willett & Pashley, architects, Chicago.

Art Institute, Chicago, with floor plans. Shepley, Rutan & Coolidge, architects.

House at Port Henry on Lake Champlain. Frank T. Cornell, architect, New York.

First Christian Church, Covington, Kentucky. Dittoe & Wisnall, architects, Cincinnati.

Two designs with floor plans for residences. Manley N. Cutter, architect, New York.

Residence of E. A. Wikstrom, Momence, Illinois. Willett & Pashley, architects, Chicago.

Residence for J. W. Woodworth, Kalamazoo, Michigan. George W. Maher, architect, Chicago.

Blackford County Courthouse, Hartford City, Indiana. La Belle & French, architects, Marion, Indiana.

Interior Decoration of Dome, Administration Building, World's Columbian Exposition, Chicago; view from ground. Richard M. Hunt, architect, New York. This view is taken from the ground by pointing the camera vertically. The position of the balconies around the rotunda will be readily seen; from which point the side lines of the windows are in vertical perspective up to the cornice at the spring of the curve. All the paneling and ornamentation, as well as the figures, are in low relief, and are picked out in quiet shades of color. The coloring was done by F. D. Millet after consultation with Mr. Hunt, and brings out the ornamentation most effectively. On account of the glare of light at the opening of the inner dome Mr. Dodge's great painting, which is on the super dome, cannot be seen in the picture. Unfortunately it is but little seen in reality from any point of view, and it must be confessed that it was almost wasted labor. Mr. Hunt's work speaks for itself, and can be studied more leisurely from the photogravures than at the building. It is modern French in all its motives.

Three views in the German Headquarters Building, World's Columbian Exposition, Chicago. Johannes Radke, architect, Berlin: 1. The North Exhibition Hall from the northwest corner of the balcony. 2. The Chapel looking west, or toward the apse. 3. The Chapel looking east. The German Headquarters Building, the largest, the most expensive, and withal the most important of all the foreign buildings, is located on the east side of the grounds facing Lake Michigan. We published two photogravure illustrations of the exterior in our July issue, and unfortunately through misinformation received from a German official, ascribed it to Karl Hoffaker, who designed the German Court in the Manufactures building and the German Village. These views show the interior of the building as it appeared just before the close of the Exposition. Their most interesting feature is the timber roof construction, all of which was framed in Germany. The illustrations

give some suggestions of the decoration which is in polychrome throughout. Everything seen is as permanent and substantial as if erected to stand hundreds of years. The Chapel was the receptacle for the exhibits from Germany of church furniture and vestments, and the room with timber roof contained part of the immense exhibition of published books, engravings and photographs.

Photogravure Plate: The Exposition Memorial Monument, South End of Grand Canal, World's Columbian Exposition, Chicago. Peabody & Stearns, architects, Boston, Massachusetts; M. A. Waagen, sculptor. Two years ago, when the Exposition buildings were only partially completed, the directors issued the first of the large colored lithographs, which were intended to bring it into prominence, from the admirable drawings of Charles Graham. This was a view from the terrace west of the Agricultural building, showing the Machinery hall and the Colonnade that was to connect it with the Agricultural building, at the south end of the Grand Canal. In front of the Colonnade was shown the proposed monument, which is the subject of our illustration. It so happened that what was the first subject illustrated was the last to be touched by the hand of a mechanic or artist. For it was brought to its present condition late in June, and was never entirely completed. The management ordered all further work at the park stopped, and the completion of the monument was about all that remained to be done. Four figures, each twelve feet high, modeled by Messrs. Evans & Bachmann, were to have stood on the projecting bases in front of the Consoles, and four nude boys astride of dolphins were to have been placed below each inscribed panel where the garlands are caught up in the center. The water for the four basins was to have issued from the dolphins' mouths. The basins have therefore been dry ever since except when they have caught the rain water. The imagination, therefore, will have to supply these omissions. All that appears of a darker shade in our illustration is Portland cement work, including the lions, and is relatively of a permanent nature. The rest of the work is of staff on a framework of wood. It was built as if to commemorate the spot on which the Exposition stood. This is the inscription on the four sides of the die in four languages:

FOUR HUNDRED YEARS
AFTER THE DISCOVERY
OF THIS CONTINENT BY
CHRISTOPHER COLUMBUS
THE NATIONS OF THE WORLD
UNITE ON THIS SPOT TO
COMPARE IN FRIENDLY EMU-
LATION THEIR ACHIEVEMENTS
IN ART, SCIENCE, MANUFACTURES
AND AGRICULTURE.

If it is ever rebuilt in enduring granite, the history of the Exposition should be inscribed on the shaft, and the original design carried out. There could be no more fitting place than where it now stands. Our view is taken from the second floor of the Colonnade near the center and looking north. To the right is the Agricultural building and beyond it the Manufactures and Liberal Arts building. To the left is the Electricity building, and in the distance is seen the dome of the Illinois State building. The sculptured horses on the bank of the canal are also by Waagen. The several groups of persons around the base of the monument serve to suggest its great size.

PHOTOGRAVURE PLATES.

Issued only with the Photogravure edition.

Interior Decoration of Dome, Administration Building, World's Columbian Exposition, Chicago; horizontal view from gallery. Richard M. Hunt, architect, New York. This view taken in connection with that last described, gives a very complete illustration of the interior decoration taken from a point that was inaccessible to the ordinary observer.

Interior of German Court, Manufactures Building, World's Columbian Exposition, Chicago. Karl Hoffaker, architect. This shows more clearly what was alluded to in the description of the Armbruster gates. The arched doorways seen are entrances to other interior courts of the German section. The whole arrangement was very ingenious. The twisted columns of the central pavilion are all made of glazed majolica. The two largest vases next to the stairways have been presented to the Columbian Museum. Only the lowest part of the Germania group is shown in the illustration.

Wrought-Iron Gates and German Court, Manufactures Building, World's Columbian Exposition, Chicago. Karl Hoffaker, architect. Gates designed and made by Armbruster Brothers, Frankfort-on-Main. These gates and their connecting fence were an exhibit, and they gave the keynote to the whole German court. By selecting them to form the center of the east front, Herr Hoffaker was enabled to prepare a plan of installation which, instead of concealing all the exhibits behind a screen, threw them open to the view of all who passed on Columbus avenue. He accordingly designed the whole installation in rising stages, one behind the other, terminating at the highest point with the great Statue of Germania. The whole has a monumental effect which is very unusual in international exhibition courts. The gates speak for themselves. Like the Winslow gates, made in Chicago, they are entirely handworked, and both are covered with Rococo ornamentation. There were many other examples of foreign artistic ironwork, but none so prominent as these.

Interior Decoration of Dome of Fine Arts Palace, World's Columbian Exposition, Chicago. Charles B. Atwood, architect. The view here given was taken from the gallery opposite to the

one shown in the picture and depicts the dome from the floor to the main cornice. Above the latter the arch is a semi-circle divided into many deep square caissons, each surrounded by two enriched moldings after the manner in which the dome of the Pantheon of Rome was probably treated before it was denuded of its decorations. This also is open at the top, and covered with a skylight. The whole treatment is Roman with French Renaissance details. It is a true Pendentive dome. The pilasters and first cornice are very severe, the style being Ionic, and the coloring plain. Decoration is applied mainly to the four arches and pendentives. This was designed by E. E. Garnsey, of New York, under the direction of Mr. Atwood and Mr. Millet. The only pictorial decoration is in the circles in the pendentives, which show winged figures supporting tablets inscribed with the words "Sculpture," "Painting," "Architecture" and "Engraving." These are from cartoons by F. D. Millet, and the whole was done under the direction of Mr. Atwood. A comparison between this and the dome of Mr. Hunt will demonstrate the difference between classic and renaissance treatment of very similar problems.

Minaret in Cairo Street, Midway Plaisance, World's Columbian Exposition. Max Herz, architect, Cairo, Egypt. This view is taken from the roof of a building outside of the Cairo reservation, as not even the official photographer of the Exposition was allowed to take a camera within the sacred precincts, hallowed by the *danse du ventre* and other devotional rites of the true believers. The minaret and mosque of which it forms a part is a careful copy of the Mosque Kaid Bey, in Cairo, which is in good preservation and in daily use. It was used for devotional purposes by the Moslems of Cairo who had made the backsheesh pilgrimage to Chicago, and daily at the proper times the Muezzin called the faithful to prayer from the first balcony seen in our illustration. An opposition Muezzin was to be heard at the same time from the Turkish village across the street, which had a minaret of modest pretensions. This minaret has been executed in staff and is the most valuable exterior contribution to architectural art in Cairo Street, though many exquisite examples of Saracenic carving and ornamentation adorned the interior of several of the rooms. These were taken from old mosques and palaces and brought to the Fair and placed on exhibition intact by a company, of which Mr. George C. Prussing, of Chicago, was the president, and to whom much of the architectural correctness of the Cairo Street was due.

Exterior of Tiffany and Gorham Court, Manufactures Building, World's Columbian Exposition, Chicago. John Dufais, architect, New York. All the foreign nations located on Columbus avenue, in the Manufactures building, except Great Britain, erected architectural inclosures, or at least fronts, to their courts. At the center of the building, where this was crossed by the great east and west aisles, and at the intersection of these, was located the great clock designed by M. Sandier for the Exposition Company, and there the four great nations of the earth came together. These were France, Great Britain, Germany and the United States. Great Britain's section was defaced by the most unartistic booth of any of her individual exhibitors at this important point. The French and German angles were finished with imposing architectural façades and inclosures. The United States will have to be thankful to three exhibitors for not being left in such a disgraceful plight as Great Britain. The Gorham Manufacturing Company, of Rhode Island, Tiffany & Company, and the Tiffany Decorative Company, of New York, united their exhibits in a unique structure, and made the United States corner a prominent feature of the Exposition, so that it has had the reputation of being the United States court, and has thus charitably concealed all the artistic sins that have been committed behind it—that is, behind the exhibits of these three. Only the entrance to the Gorham court is shown on the illustration. It extended almost as far to the right as Tiffany's did to the left. The four last bays on the left belonged to the Tiffany Decorative Company, which made the most important exhibits of decorative architectural art in the whole Exposition. The roof of its Byzantine chapel is shown with the rose window in front. We are so thankful that this inclosure was erected at all that the voice of criticism will have to be hushed. For the information of the reader it must be said that the great column is of the Roman Doric order, and is surmounted by an eagle. The exhibitors have also, with equal magnanimity and generosity, assumed all the responsibilities of the national government toward its foreign visitors by placing an appropriate inscription on the pier under this column.

The Director of Works and Staff of the World's Columbian Exposition, Chicago. The photograph contains all of the heads of departments and the chief assistants, with one or two exceptions. The absence of Mr. Cloys, foreman of the Drafting Department, and Mr. Weatherwax, his assistant, will be noticed. The names of those in the photograph include Daniel H. Burnham, Director of Works; Charles B. Atwood, Chief of Design; Frank D. Millet, Director of Color and of Ceremonies; Ernest R. Graham, Assistant Director of Works and General Manager; John Worchester, Chief Engineer Intramural Railway; W. B. Green, Superintendent of Terminals; F. E. Ferguson, Superintendent of Carpentry; P. O'Malley, Acting Chief Fire Department; M. M. Chesrown, Secretary to Assistant Director of Works; C. F. Foster, Mechanical Engineer; J. W. Alvord, Engineer of Grades and Surveys; C. M. Wilks, Assistant Engineer Water Department; C. D. Arnold, Chief of Photography; H. E. Graham, Assistant Secretary; A. B. Smith, Secretary of Concessions; R. Ulrich, Superintendent of Landscape; William Storrs MacHarg, Engineer of Water Supply, Sewerage and Fire Protection; F. Weissinger, Stenographer to Assistant Secretary; Charles Baldwin, Attorney; S. G. Nailer, Assistant Electrical

Engineer; W. D. Richardson, General Superintendent of Buildings; W. H. Holcomb, General Manager of Transportation; Clarence Humphry, Clerk; Heber De Long, Clerk; John Bonfield, Chief of Secret Service; R. H. Pierce, Chief Electrical Engineer; Capt. F. W. Symonds, Superintendent of Marine Transportation; Harry Hudson, Purchasing Agent; D. S. Shankland, Chief Engineer; Dr. J. E. Owens, Medical Director; L. A. Scovil, Superintendent Electrical Department; T. Montgomery, Secretary to Attorney; Harry Higinbotham, File Clerk; Colonel E. Rice, Commandant; Captain Smith, Adjutant; H. Parish, Clerk; J. E. Kelly, Secretary to Director of Color; W. C. Force, Stenographer; W. Whitmore, Clerk; Frank Cordier, Clerk; Montgomery Breckinridge Pickett, Secretary to Director of Works; G. H. Binkley, Assistant Engineer of Grades and Surveys; E. G. Nourse, Engineer of Railways; R. B. Cavanaugh, Steve Donlan, Michael Murray, J. E. Hicks, Columbian guards, Orderlies to Director of Works; E. H. Jackson, Janitor.

MOSAICS.

THE corner stone of the new engineering hall of the University of Illinois was laid on Wednesday, December 13, 1893, the exercises commencing at 1:15 P.M. The principal address was delivered in the chapel by R. H. Thurston, Dr. Eng., director of Sibley College, Cornell University.

THE seventh annual convention of the National Association of Builders will be held at Boston, commencing on Tuesday, February 13, 1894. All directors and members of committees of the National Association will meet at the rooms of the Master Builders' Association on the preceding day at 10:30 o'clock, at which a full attendance of those officers and members is desired by the secretary.

M. O'BRIEN & SON, Wabash avenue and Adams street, Chicago, have on exhibition the first consignment of a collection of large size carbon photographs of some of the most celebrated of the architectural monuments of Europe, ancient and modern. They are made by F. Hegger, formerly an amateur photographer of New York. The views were taken by Mr. Hegger on the spot, and enlarged by the solar process so as to cover plates of 36 by 48 inches, a size which it is believed has never before been attained in photography. The carbon prints were made in England, there being no facilities for making them in this country. These views are the result of suggestions made by Richard M. Hunt, of New York, formerly president of the American Institute of Architects, as stated by the publisher. They are too large for portfolios, but being printed in an indestructible pigment are well adapted for framing, which is not the case with the majority of European photographs. They are especially suitable for art schools and associations, as well as architectural studios. Thirty different views have already been received, and the number may be increased to 380 if Mr. Hegger receives encouragement. It will probably take a year to complete the list. Among those to be seen now are the cathedrals of Cordova, Seville, Rheims, Beauvais, Venice, Pavia and Milan. The retail price is \$30 each.

SYNOPSIS OF BUILDING NEWS.

Architects are invited to furnish for publication in this department monthly or occasional reports of their new work before the letting of contracts. Reports of buildings costing less than \$5,000 are not published.

Baltimore, Md.—All architects are invited to submit plans in competition for a new courthouse to be erected in this city, at a cost of not less than \$1,400,000. Full particulars can be had by addressing F. C. Latrobe, mayor.

Chicago, Ill.—Architects Lamson & Newmau: For E. B. Dyer, at 128 Center street, a three-story store and flat building, 24 by 70 feet in size; to be of handsome stone front, have hardwood interior finish, all the modern and sanitary improvements.

Architect H. H. Waterman: For E. S. Pike, at Beverly Hills, a two-story residence, first story to be constructed of Marquette brown stone, and the balance to be of timber and plaster work; the interior will be finished in hardwoods, have sanitary plumbing, etc. For W. B. French, on Prairie avenue near Forty-seventh street, a two-story and attic residence, 30 by 65 feet in size; to be of stone front, have hardwood interior finish, Spanish tile roof, all modern improvements. Also made drawings for a two-story residence, 25 by 55 feet in size; to be erected at Fifty-fourth street and Ridgewood court; it will be of pressed brick and stone front, have Spanish tile roof, hardwood finish, modern plumbing, furnaces, etc. Also making drawings for a three-story and basement flat building, 50 by 60 feet in size; to be erected at Seventy-first and Honore streets; the front will be of pressed brick and stone, the interior to be finished in hardwood, and have all the sanitary improvements, mantels, gas fixtures, laundry tubs, furnaces.

Architect H. R. Wilson: For W. H. Pruyt, at 4630 Drexel boulevard, a handsome three-story and basement residence, 28 by 80 feet in size; to be of Bedford stone front and pressed brick on the side, and slate roof; the interior will be elegantly finished in mahogany, quarter-sawn oak, cherry, bird's-eye maple and Georgia pine; will put in specially designed mantels and sideboards, also marble wainscoting, tile and mosaic work, electric light, the best of open nickel-plated plumbing, hot-water heating, etc.; cost about \$25,000.

Architect J. L. Silsbee: For C. Jevne & Co., remodeling building at 109 to 111 Wabash avenue, two-story new front, etc.

Architect Joseph P. Hetherington: For J. Karl, on Halsted street, north of Fullerton avenue, a three-story store and flat building, 24 by 60 feet in size; to have a stone front, all the modern improvements, mantels, gas fixtures, etc. Also making plans for a two-story flat building, 23 by 64 feet in size; to be erected at Oakdale avenue near Halsted street; the front will be of rock-faced stone, the interior to be finished in hardwood, and have all the best of improvements, heating, etc.

Architect Simeon B. Eisendrath: For the Gottfried Brewing Company, a two-story store; to be of pressed brick and stone front; to be erected at 26 Chapin street.

Architect F. B. Newell: For James E. Baker, remodeling Hotel Colorado, at the corner of Sixty-third street and Cottage Grove avenue; it will be made into a first-class modern apartment house; will put in new plumbing, etc.

Architects Stiles & Stone: For Mrs. Mary A. Hamlin, at Sixty-third street and Illinois Central tracks, a three-story store and flat building, 26 by 70 feet in

size; to have a front of pressed brick, hardwood finish, modern plumbing, gas fixtures, mantels, etc. For Robert Stevenson, at 523 La Salle avenue, a three-story residence, 23 by 70 feet in size; to be of handsome stone front, have the best of modern plumbing, all hardwood interior finish and mantels, electric light, hot-water heating. For the same owner, a three-story residence, 45 by 50 feet in size; to be of pressed brick and stone front, have hardwood finish and mantels, the best of modern plumbing, furnaces, etc. Also made plans for the Industrial Home, to be erected at Montrose; it will be three stories, 65 by 80 feet in size; to be of pressed brick and stone, have hardwood interior finish, all the modern conveniences, lighting, steam heating, etc.

Architects Church & Jobson: For M. E. Johnson, at Edgewater, a two-story residence; to be of frame construction with stone basement, have hardwood interior, gas fixtures, mantels, furnace, etc. For C. Kahler, on Homan avenue near Congress street, a two-story flat building, 25 by 70 feet in size; to be of stone front, have hardwood finish, mantels, hot-water heating.

Architects Cowles & Ohrenstein: Making plans for a three-story flat building, 50 by 65 feet in size; to have a stone front, hardwood finish and mantels, all improvements; to be erected on the North Side. For Harriet M. Gage, on La Salle street near Fifty-fifth, a two-story flat building, 25 by 60 feet in size; to have sanitary plumbing, mantels, gas fixtures, etc. For Thomas O'Connor, a two-story flat and store building, 25 by 65 feet in size; to have all improvements; to be erected at Seventy-fifth street and Cottage Grove avenue. For Francis B. Felt, a block of six two-story houses, 140 feet front by 40 deep; to be erected at East Chicago; they will be brick veneered and have all the modern plumbing, mantels, gas fixtures, etc. For J. Phillipson, at 8410 Dussold street, a four-story and basement storage warehouse, 50 by 90 feet in size; to be of pressed brick and terra cotta front, have elevator, etc.

Architect J. A. Thain: For Charles E. Frankenthal, a three-story and basement residence, 40 by 88 feet in size; to be of stone front, have slate roof, hardwood interior finish, specially designed mantels, sideboards, etc.; hot-water heating, electric light and all the best of sanitary and modern improvements; the cost will be about \$50,000.

Architect E. A. Hogenson: For L. J. Iverson, a three-story and basement store and flat building, 48 by 50 feet in size; to be of pressed brick and stone front, have the modern sanitary improvement, mantels, gas fixtures, etc.; to be erected at the southwest corner of Emerson avenue and North Leavitt street; cost about \$15,000. For J. Jordan, at the southwest corner of Lincoln avenue and West Huron street, a three-story store and flat building; to be of pressed brick and stone front, have the sanitary plumbing, mantels, etc.

Architect W. K. Johnston: For Dr. George N. Kreider, a two-story basement and attic residence, 37 by 50 feet in size; to be constructed of pressed brick, stone and shingles, have the best of modern improvements, electric light, mantels, etc.

Architect Robert S. Smith: For B. W. McDevitt, a three-story flat building, 50 by 65 feet in size; to be erected on the southeast corner of Wentworth avenue and Sixty-eighth street; the front will be of pressed brick and stone; cost \$16,000. Also in the rear of this, a four-story flat building, 50 by 70 feet in size; will put in all the modern conveniences, electric light, heating, etc.

Architect H. M. Hansen: For Dawson Brothers, a three-story flat building, 100 by 112 feet in size; to be of pressed brick and stone front, have hardwood interior finish and mantels, all the modern sanitary arrangements, gas fixtures, heating, etc.; to be erected on the southwest corner of Paulina and Walnut streets.

Architect Thomas Wing: For the Northwestern Yeast Company, a six-story and basement factory, 100 by 120 feet in size; to be of pressed brick and stone front, mill construction, have plumbing, heating, etc.

Architects Wood & Lovell: For E. D. Wilt and Thomas H. Phelps, at Pittsburgh, Pennsylvania, a three-story hotel and theater. The first story and basement will be of stone and the balance of pressed brick and terra cotta. Electric light, steam heating and the best of modern improvements will be put in. The theater will be made to seat eighteen hundred people. The cost will be upward of \$200,000. The same architects made drawings for the Empire theater now being erected at Quincy, Illinois. It is 88 by 120 feet in size, and will have a seating capacity of fourteen hundred. The front is of terra cotta and pressed brick; electric light, steam heating and all improvements are being put in. The same architects are also finishing drawings for the remodeling of the old Armory building into a modern theater to be called the Trocadero. It will be a four-tier house and have accommodations for an audience of eighteen hundred people. The building in the front will be six stories high, and 72 by 157 feet in size. The first three stories will be of stone and the balance in Roman pressed brick and terra cotta. The structure will be made absolutely fireproof, the interior being elaborately finished in marble mosaic and tile work; will also put in electric light, steam heating and the latest improvements in all the necessary equipments for a first-class modern theater; the cost will be about \$200,000.

Architect D. A. Lapointe: For James Keigher, a two-story flat building; 25 by 70 feet in size; to be of stone front, have all sanitary improvements, mantels, hardwood finish, gas fixtures, furnaces, laundry tubs; also making drawings for a three-story and basement store and flat building; 25 by 90 feet in size; to be of pressed brick and stone front, have all the modern conveniences, heating etc.; to be erected at the corner of Hoyne and Chicago avenues. For the Garden City Sand Company, a two-story frame store and dwelling; to be built at South Manitou Island, Michigan. For Louis Bastien, a three-story and cellar store and flat building; 25 by 75 feet in size; to be of pressed brick and stone front, have all the sanitary plumbing, gas fixtures, mantels, laundry tubs, etc.; to be built at Seventy-second and Green streets.

Architects Klempell & Borst: For George M. Millard, two two-story residences, 33 by 60 feet in size; to be erected at 3717 and 3719 Vincennes avenue; first story and basement to be of buff Bedford stone and the remainder of Roman pressed brick and stone trimmings; the interior will be finished in hardwoods and have the best of modern sanitary appliances, mantels, laundry tubs, gas fixtures, heating, etc. Same architects are making drawings for the remodeling into a modern apartment house of the Hotel Normandy, situate on Sixty-seventh street, near Hope avenue; bathrooms, closets, washbowls, mantels, gas fixtures, laundries, etc., will be put in. For J. McClellan they made plans for remodeling the Hotel St. Jerome into a modern six and seven room apartment house; it is situate at Sixty-sixth place, near Hope avenue; all the modern sanitary improvements, laundries, heating, lighting, etc., will be put in. For Edward Wisdom they are also making drawings for remodeling the Hotel Capel, at Sixty-fifth street, near Stony Island avenue. It will be converted into a modern six and seven room flat building, replete with all sanitary and modern conveniences. Same architects are preparing drawings for five nine-room houses to be erected on Woodlawn avenue and Sixty-fifth street; the best of sanitary plumbing, mantels, hardwood finish, gas fixtures, furnaces, etc., will be put in. For Edgar Munger they are getting out plans for remodeling the Hotel Seville, situate on Sixty-sixth place, near Hope avenue, into a modern apartment house; it will be finished up in first-class style, with all the necessary sanitary specialties, mantels, gas fixtures, laundries, heating, etc.

Architect J. N. Emmons: For Thomas Marsh, at Oak Park, a very neatly designed two-story basement and attic residence, 30 by 47 feet in size; to be of frame construction with stone basement, have hardwood interior finish, electric light, the best of modern sanitary arrangements, laundries, steam heating, etc.

Architects Thomas & Rapp: For L. L. Smith on Sedgwick street, a three-story flat building, 25 by 87 feet in size; to be of buff pressed brick with cut stone trimmings; have all the modern sanitary and other improvements.

Architect J. J. Egan: For M. Prindville, a four-story and basement apartment house, 30 by 110 feet in size; to be erected at 343 Chestnut street; it will have a stone front, hardwood finish and mantels, gas fixtures, laundry tubs, heating, etc.; cost about \$22,000.

Architect George W. Kingsley has completed drawings for a two-story basement and attic residence, 25 by 45 feet in size; to be erected at Seventy-third street and Bond avenue, for C. J. Baker. It will be of pressed brick and stone front, have all the improvements, gas and electric fixtures, laundries and furnace heating. For H. L. Hanson he made drawings for remodeling Hotel St. Salvador, situate at Sixty-fifth street and Sheridan avenue; will put in new plumbing and all the modern conveniences.

Architect W. L. Klewer: For J. C. Morper, a three-story apartment house, to be erected at Belmont avenue near Clark street. It will have two fronts, to be of stone first story and pressed brick with stone trimmings for the

balance; all the modern sanitary plumbing, mantels, etc., will be put in. Also making plans for a store and dwelling 39 by 63 feet in size; to be erected at James avenue for Joseph Petrowski.

Architect Theodor Lewandowski is preparing drawings for a two-story building, 71 by 55 feet in size; to be erected at Krakau (Cracow), for the Industrial Exhibition, to be held in Austria next summer. It will be of frame construction, in the American style of architecture, and will contain the Polish exhibits which will be sent from this country.

Architects Mayo & Curry are finishing drawings for the Industrial School for the Blind, to be erected on Nineteenth street and Douglas boulevard; it will be a handsomely designed four-story and basement structure of pressed brick and stone; all the modern improvements will be put in, steam heating, electric light, marble wainscoting, etc.; the cost will be about \$75,000.

Architect J. H. Moore: For M. Perkins, a five-story store and flat building, 48 by 70 feet in size; to be erected at Nineteenth street near State; it will be of pressed brick and stone front, have all the modern improvements, heating, etc.

Architect Charles S. Frost: For Mrs. Henry W. Hoyt, a four-story residence, 27 by 74 feet in size; to be erected at 2723 Prairie avenue; the first story and basement will be of stone and the remainder of pressed brick, stone and terra cotta; the interior will be elaborately finished in hardwoods, have the best of modern sanitary and ventilating arrangements, electric light, combination heater, etc.

Architect F. K. Schock: For F. Wray, at Austin, a two-story residence, 28 by 54 feet in size; to be of frame construction with stone basement, have hardwood interior finish, all sanitary plumbing, electric and gas fixtures, furnace, etc. For Mrs. May Cusack, a two-story flat building, 28 by 60 feet in size; to be of frame and stone basement; to be built at Austin; will put in bathrooms, closets, mantels, furnaces. For F. Lusche, a very neatly designed two-story basement and attic residence, 32 by 45 feet in size; to be erected at Austin; it will have rock-faced stone basement and frame superstructure, the interior to be finished in hardwoods and have hardwood mantels, the best of modern plumbing, electric light, furnace heating, etc.

Architects Handy & Cady: For Mr. J. R. Winterbotham, at 3731 Armour avenue, a four-story apartment house, 25 by 80 feet in size; to be of pressed brick and stone front, have the sanitary plumbing. For C. R. Stave, on Burling street, a two-story flat building, 24 by 58 feet in size; to be of pressed brick and stone.

Architects A. M. F. Colton & Son: For C. K. Miller, a handsome five-story apartment house, 100 by 60 feet in size; to be erected at the southwest corner of Hill and Wells streets; the first story will be of stone and above of pressed brick and stone; the interior will be finished in hardwood, tile and marble, and will put in steam heating, the best of modern plumbing, mantels, laundries, etc.; cost \$40,000.

Architect I. C. Zarbell has just begun work on the three-story residence at 2929 Michigan avenue, for George Shmmer; to be of stone front, have hardwood interior, mantels, electric light, hot-water heating and all improvements.

Cincinnati, Ohio.—Reported by Lawrence Mendenhall:

Architects Des Jardins & Hayward report: For Louis Kramer, Cincinnati, a residence; materials: freestone, slate roof, furnace, hardwood, grates, gas, mantels, stained glass, etc.; cost \$25,000. For Louis Weiskopf, Cincinnati, a residence; materials: freestone, slate roof, furnace, grates, mantels, gas, plumbing, electric work, stained glass, etc.; cost \$25,000.

Architects Crapsey & Brown report: For the German Lutheran Church, Race street above Twelfth street, Cincinnati, a church edifice; materials: pressed brick, slate roof, skylights, furnace, hardwood finish, opera chairs, stained glass, etc.; cost \$20,000.

Architects Dittoe & Wisenall report as follows: For William Gerdes, Fifth and Home streets, Cincinnati, remodeling his hotel, and additions; materials: brick, lathing, mantels, steam heating, elevators, gas, plumbing, blinds, etc.; cost \$20,000. For H. F. Farnan, Covington, Kentucky, a residence; materials: pressed brick, slate roof, furnace, gas, plumbing, blinds, stained glass, etc.; cost \$5,000.

Architect A. R. James reports: For Mrs. M. W. Foote, 407 Neave building, Cincinnati, a residence; materials: pressed brick, slate roof, furnace, gas, plumbing, blinds, stained glass, grates, mantels, etc.; cost \$6,000; contractor, Charles M. Weeks, Cincinnati. For Ephraim Kohn, Cincinnati, two frame houses, with slate roof, furnaces, gas, plumbing, grates, mantels, blinds, etc.; cost \$12,000.

Architect S. S. Godley, Cincinnati, has drawn plans for remodeling and additions to the residence of M. E. Moeh, Cincinnati; the alterations are rather extensive, and will cost about \$5,000.

Architect James G. Steinkamp, 80 West court, Cincinnati, is busy on plans for flats for Thomas Emery's Sons; materials: pressed brick, slate and tin roof, elevator, gas, grates, mantels, plumbing, etc.; size, 25 by 80 feet, five stories; cost \$15,000. Also, for the same parties, another flat much smaller; materials: iron, brick, gas, plumbing, mantels, grates, plate glass, etc.; cost \$5,000.

Architect George W. Rapp is busy on plans for the new gas works previously reported.

Cleveland, Ohio.—Architects Lehman & Schmitt report a brick and stone addition to the county courthouse to enlarge the departments of the auditor and treasurer; cost, \$9,000.

Architect J. B. Shengle reports a frame residence for J. C. Rowland, 32 by 45 feet in size, slate roof, furnace heat and all modern improvements; cost, \$4,000. For E. L. Graves, a frame residence; shingle roof, second story and plaster first story; 35 by 60 feet in size; furnace heat, electric bells, grates, mantels and plumbing; cost, \$5,000.

Detroit, Mich.—Architect J. E. Mills: For Ella E. McFall, a two-and-a-half-story frame residence; size 38 by 48 feet; with all modern improvements; cost \$5,000.

Architect Gordon W. Lloyd: For F. A. Forbes, a two-story dwelling; size 28 by 50 feet; pressed brick and stone; cost \$5,500.

Architect E. C. Van Leyen: For H. R. Cross, a two-and-a-half-story residence; size 34 by 46 feet; pressed and ornamental brick, with stone trimmings; cost \$8,000.

Architects Malcolmson & Higginbotham: Are preparing plans for a two-and-a-half-story stone residence; size 40 by 80 feet; to be erected on Perry avenue; cost \$20,000.

R. H. Phillips is having plans prepared for remodeling and refitting brick and stone business block at 741 Woodward avenue.

Evanson, Ill.—Architect S. A. Jennings: Large brick-veneered double residence for Thomas Craven, trimmed with stone, heated with hot air, all modern improvements; cost, \$11,000. Residence for J. W. Donnell; first section brick-veneered, second section frame, with porch columns and balustrade of Bedford stone; interior finished in various hardwoods; heated with hot water; cost, \$9,500. Frame residence for H. K. Snyder, at Ingleside, Evanson; veneered with brick, one-story high; interior finished complete, including attic; trim, pine finished on the grain; heated with hot air; cost, \$5,000. Large brick double residence for William Blanchard, with stone trimmings; front in pressed brick; hot air heat; trim, pine; cost, \$11,000.

Milwaukee, Wis.—Architects Flanders & Zimmerman, Chicago, for the Milwaukee Bag Company, a two-story factory, brick and stone; cost, \$10,000.

Pittsburgh, Pa.—Architects Longfellow, Alders & Harlow are preparing plans for W. C. Stewart, for a block of three residences; to cost \$30,000.

Messrs. Black & Baird are having plans prepared for a large business block, to be erected in the early spring; to cost \$500,000.

Plans are being prepared for a new schoolhouse in the Nineteenth ward; to cost \$26,000.

Plans are being prepared for a large three-story hotel, to be erected near Schuetz Park of red sandstone and pressed brick; building will be begun as soon as possible.

St. Louis, Mo.—Architect F. J. Hall, for F. E. Zelle, a two-story residence; size 29 by 46 feet; brick, with modern improvements; cost, \$5,200.

Architect W. A. Swasey, for J. S. Fullerton, a two-story residence; size, 44 by 44 feet; brick and stone; cost, \$15,000.

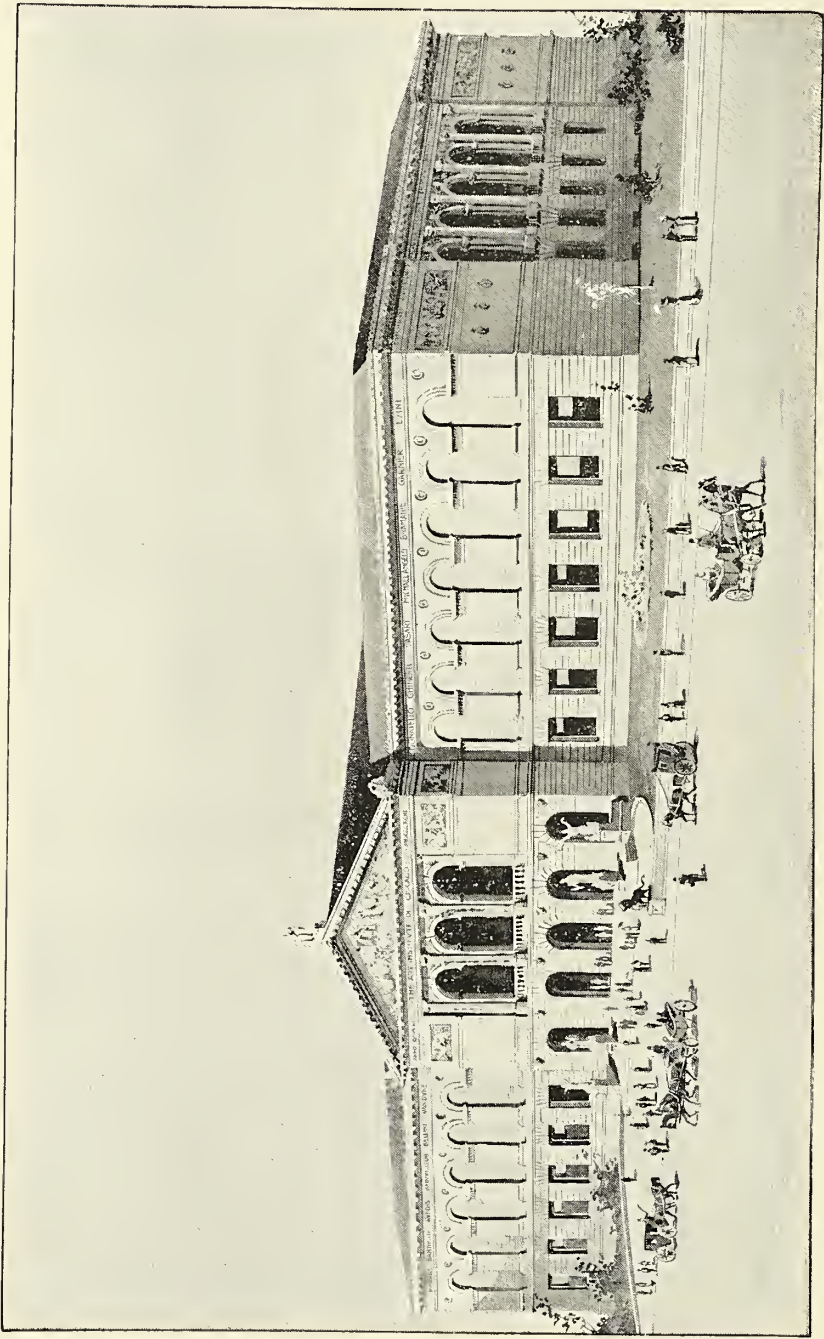


INLAND ARCHITECT PRESS.

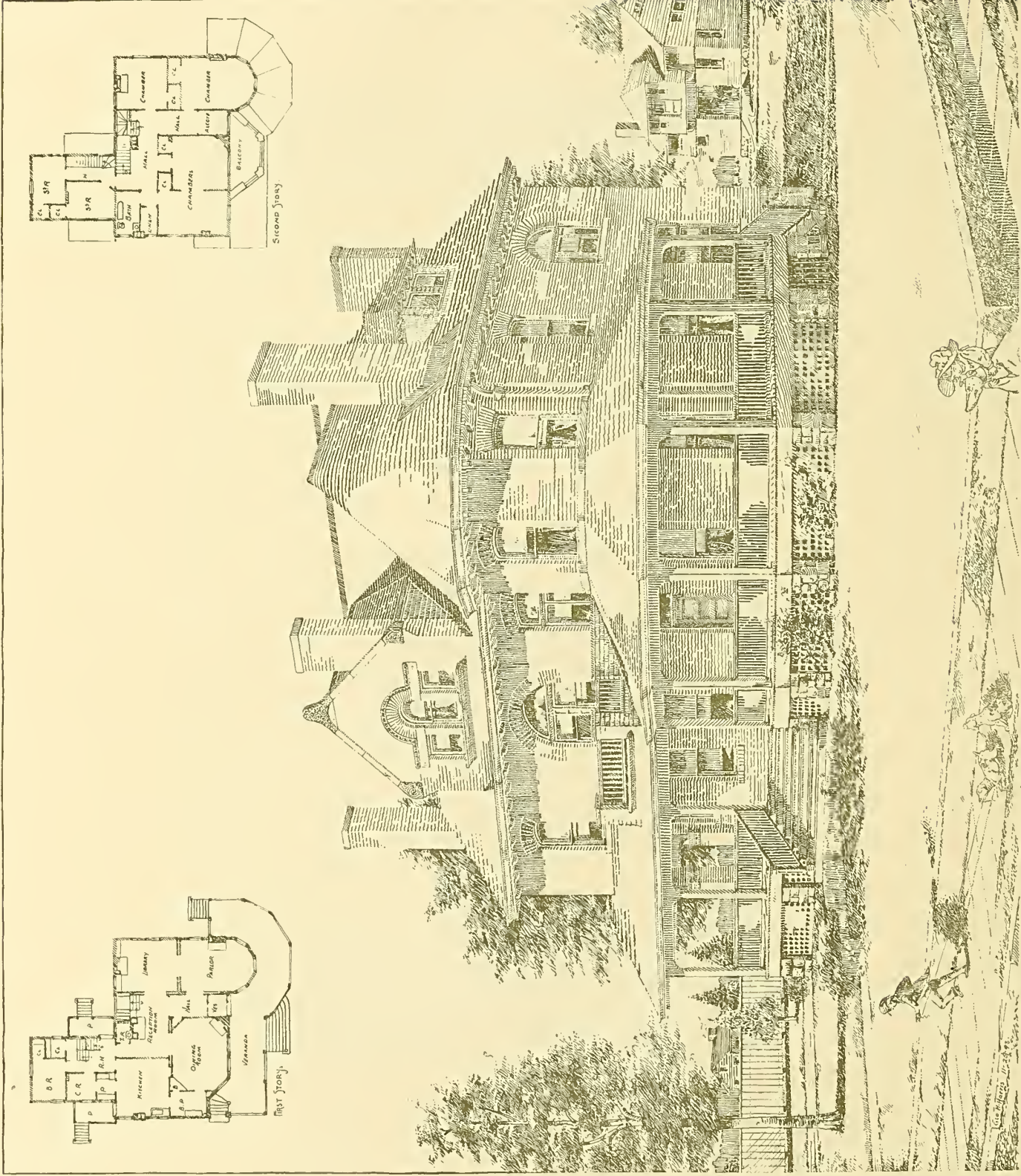
THE EXPOSITION MEMORIAL MONUMENT, SOUTH END OF GRAND CANAL,
WORLD'S COLUMBIAN EXPOSITION, CHICAGO.

PEABODY & STEARNS, ARCHITECTS, BOSTON, MASS.

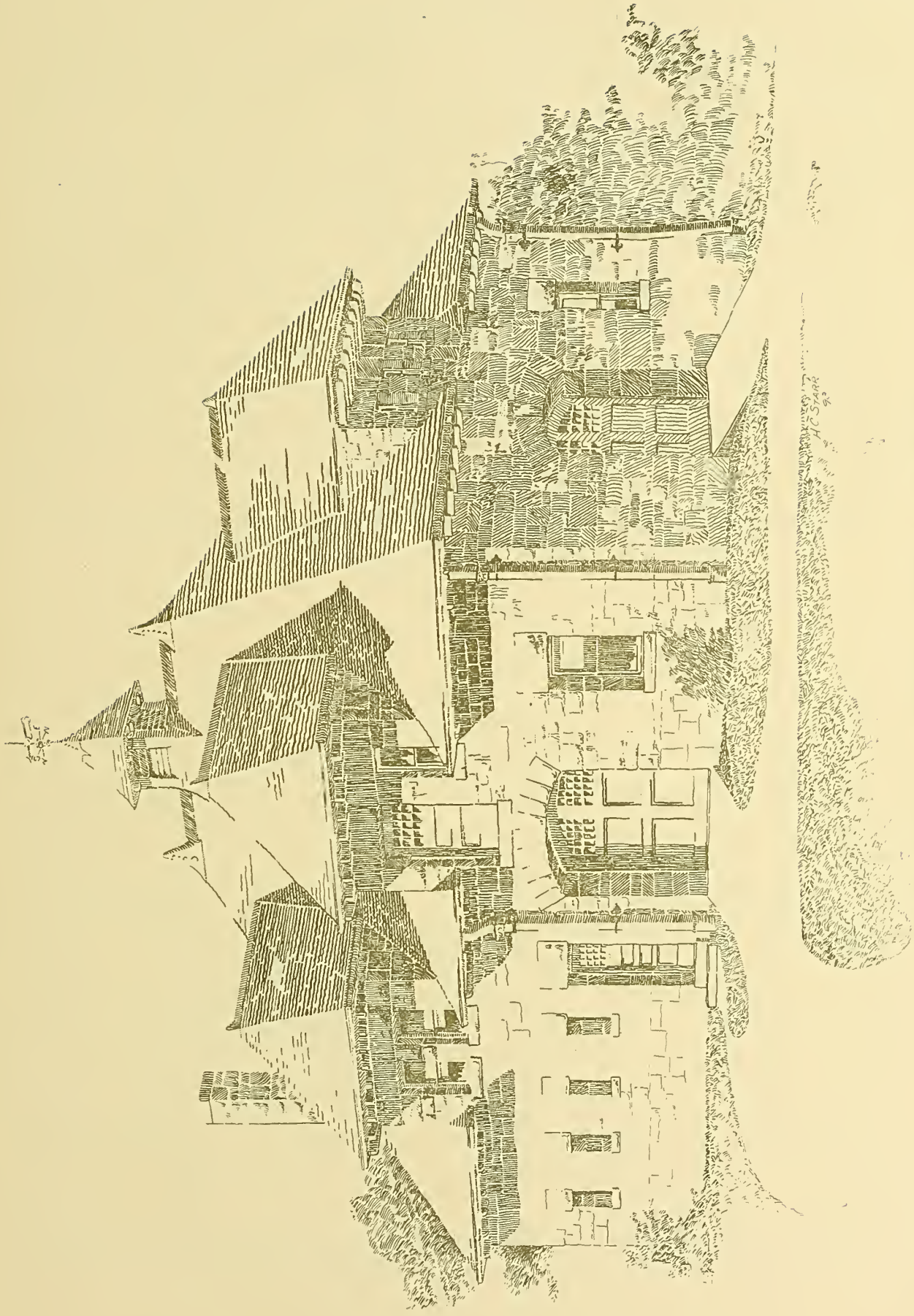
M. A. Waagen, Sculptor.



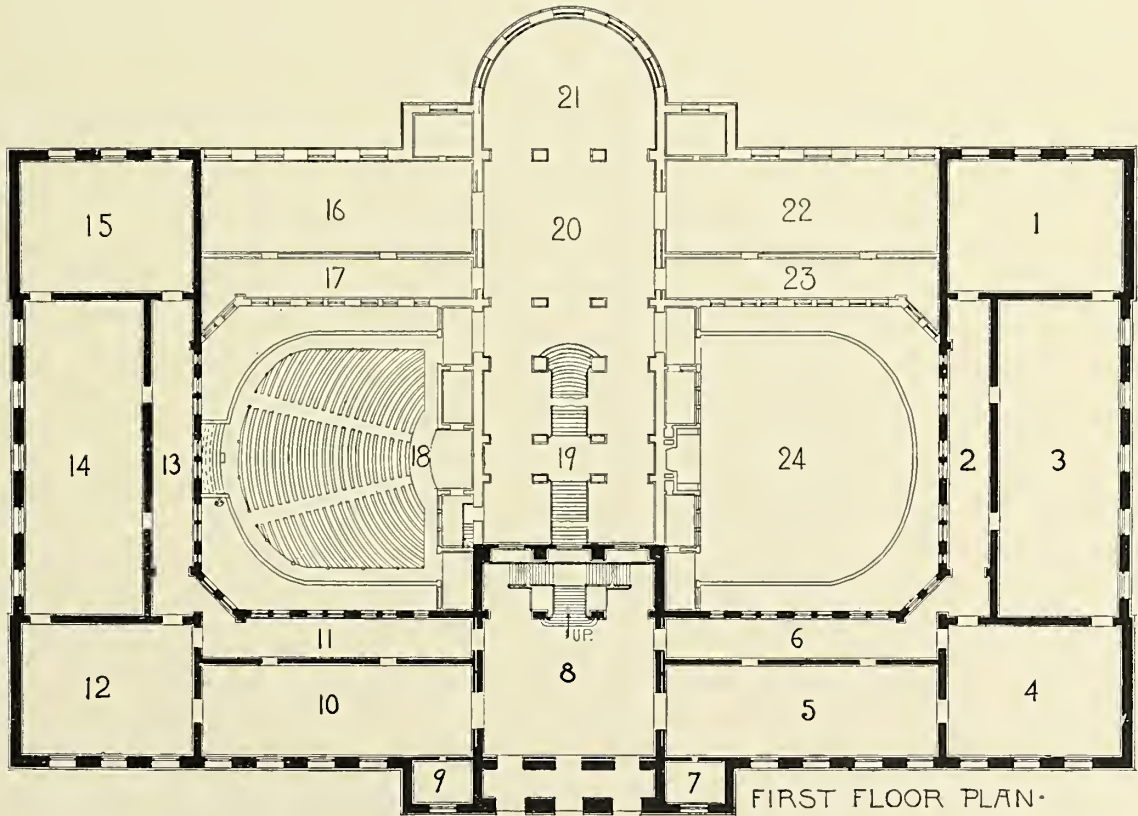
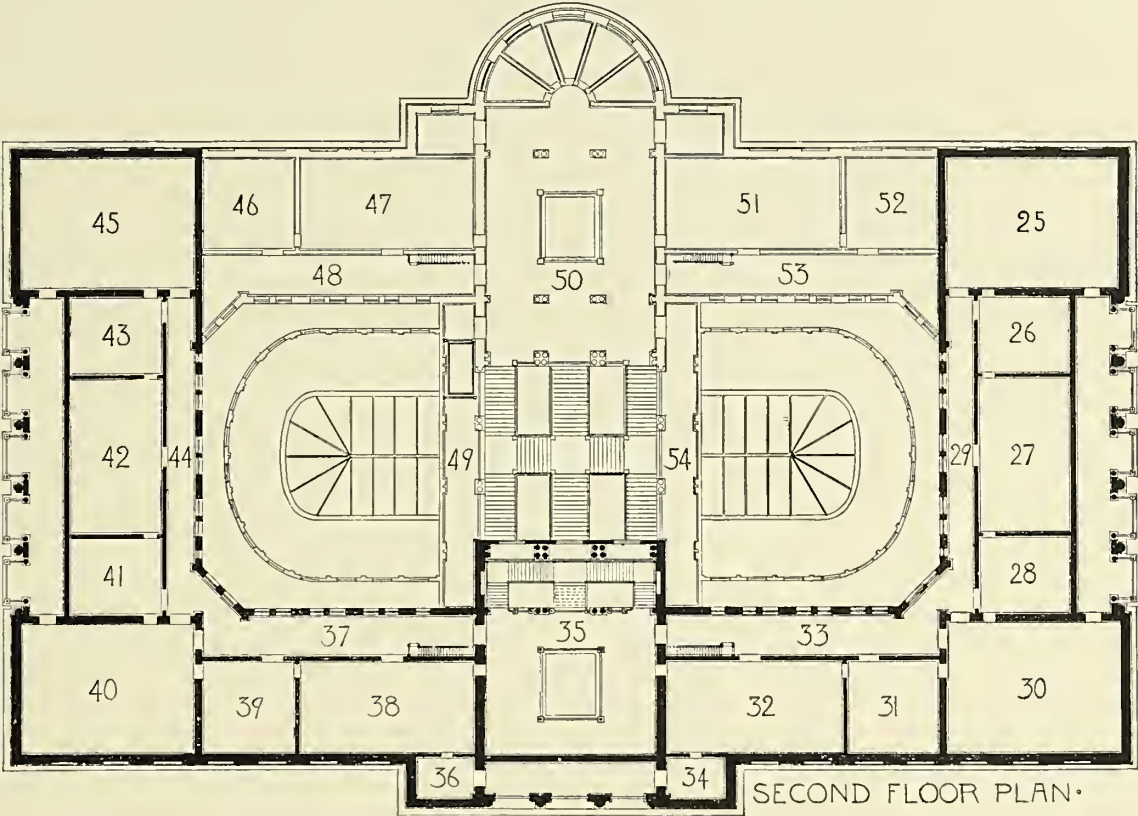
THE ART INSTITUTE, CHICAGO.
SHEPLEY, RUTAN & COOLIDGE, ARCHITECTS.



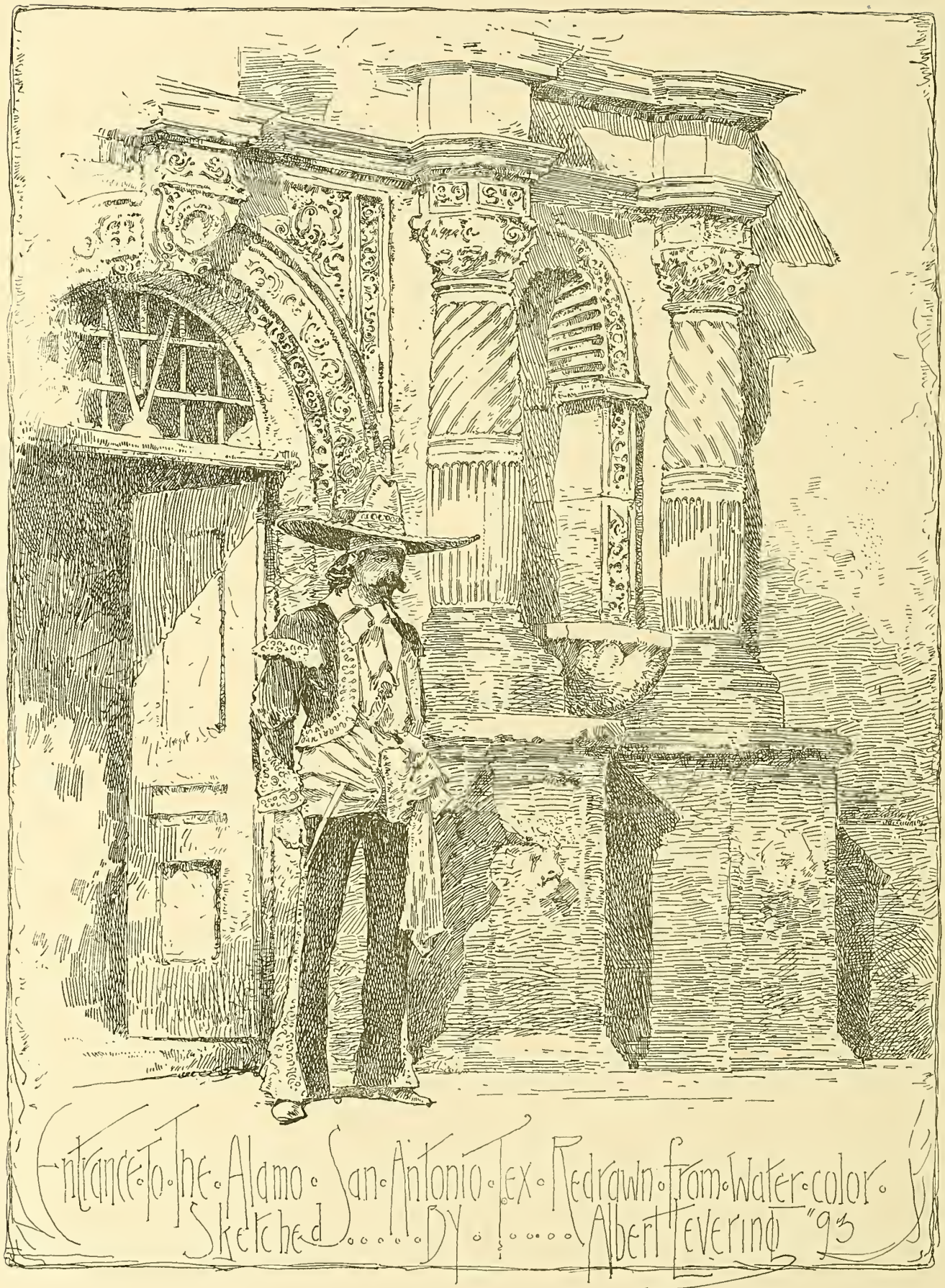
RESIDENCE OF E. A. WIKSTROM. MOMENCE ILL. © WILLET & PASHLEY ARCHITECTS, CHICAGO ILL. ©



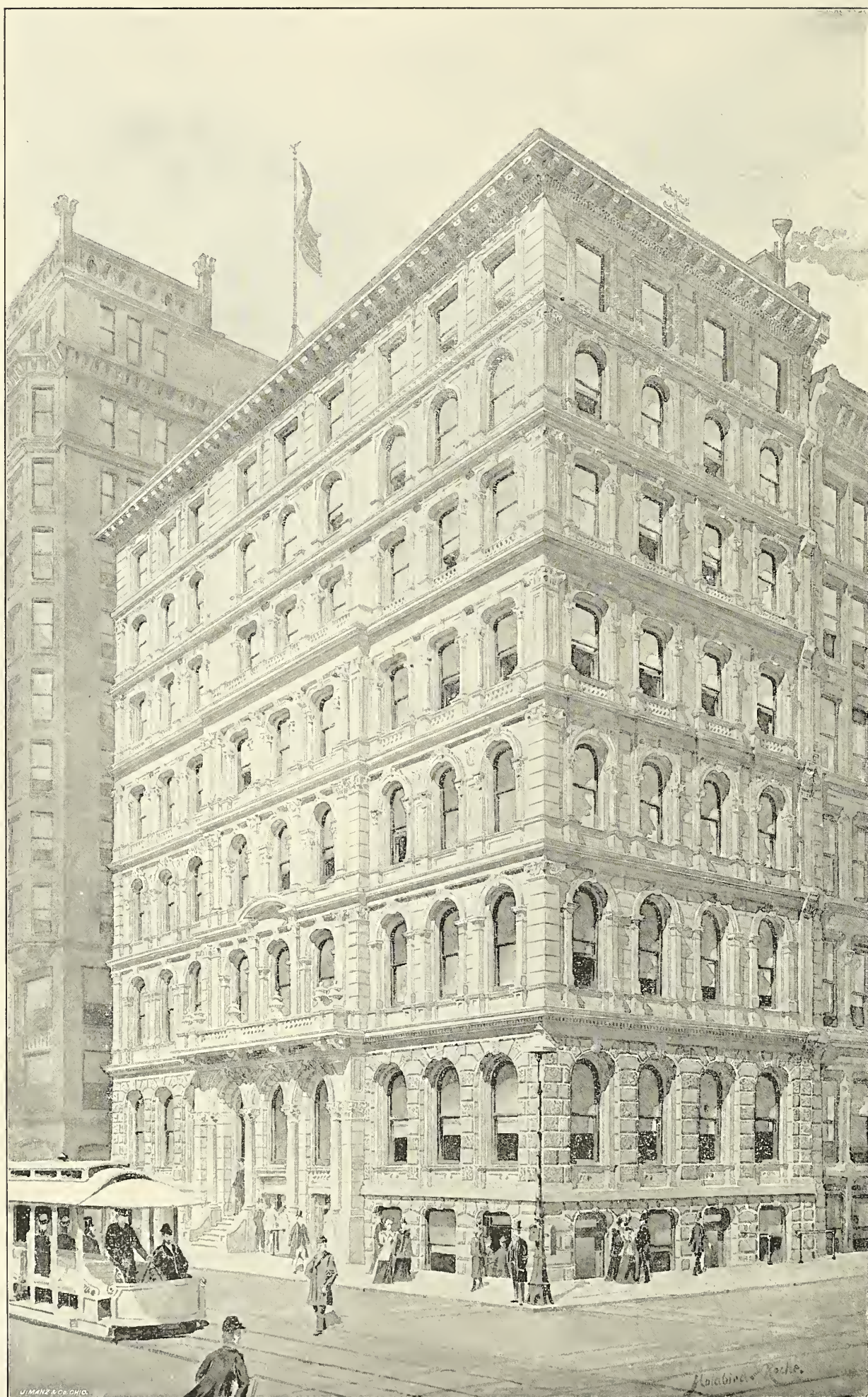
BARN FOR T. C. POWER, HELENA, MONTANA.
WILLETT & PASHLEY, ARCHITECTS, CHICAGO.



FLOOR PLANS OF THE ART INSTITUTE, CHICAGO.
SHEPLEY, RUTAN & COOLIDGE, ARCHITECTS.



Entrance to the Alamo San Antonio Tex. Redrawn from water color.
Sketched by Albert Levering '93



THE EQUITABLE BUILDING, CHICAGO

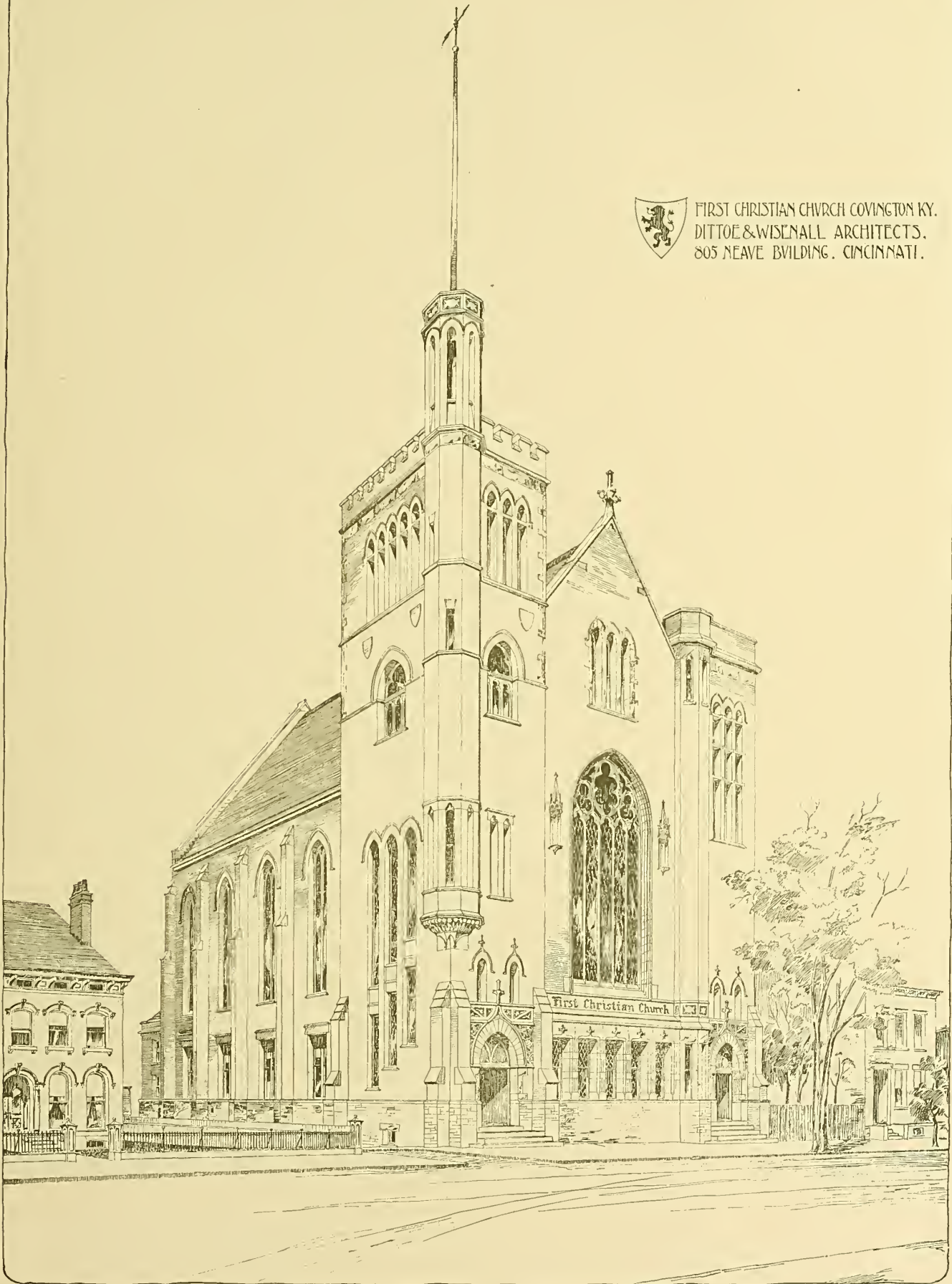
HOLABIRD & ROCHE, ARCHITECTS.

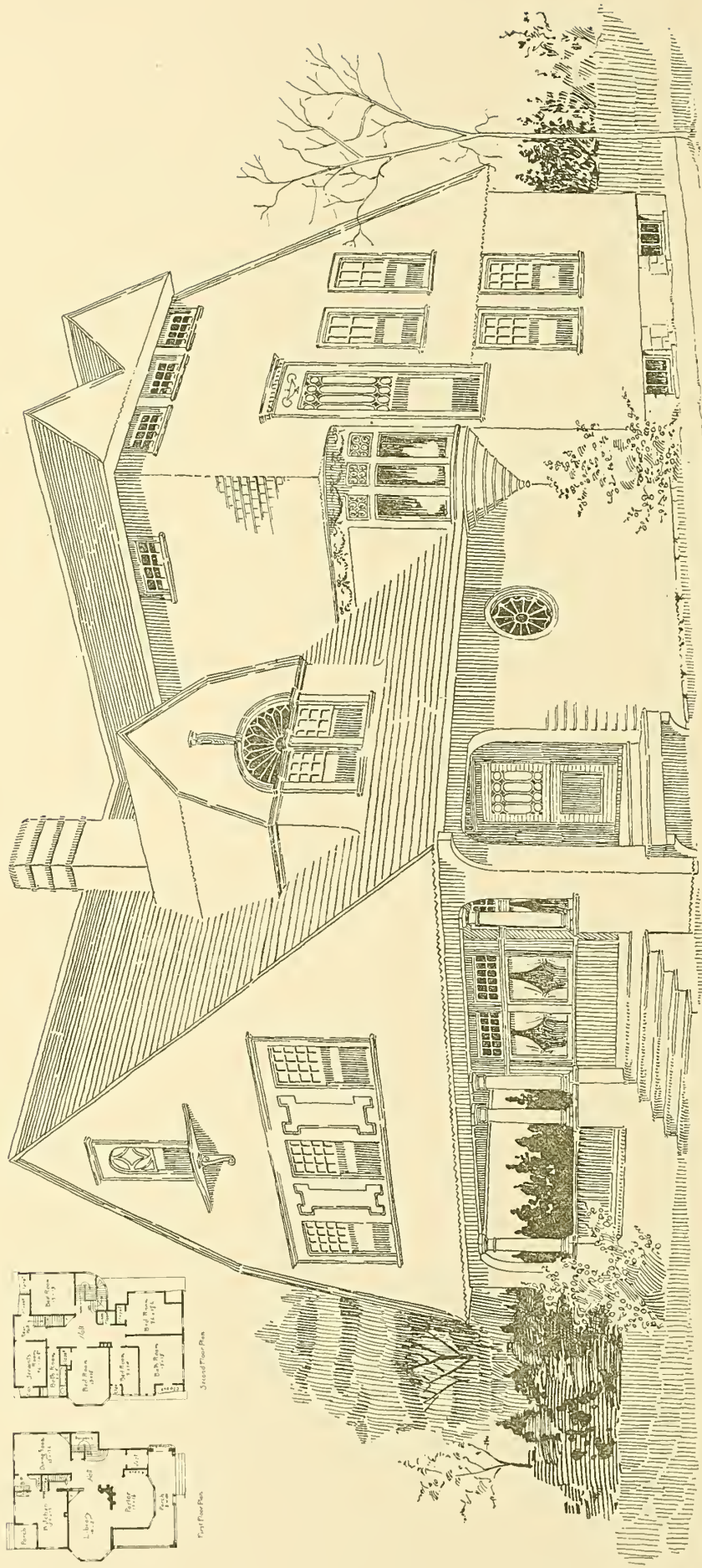


BLACKFORD COUNTY COURT HOUSE,
HARTFORD CITY INDIANA
LABELLE & FRENCH ARCHTS
MARION INDIANA

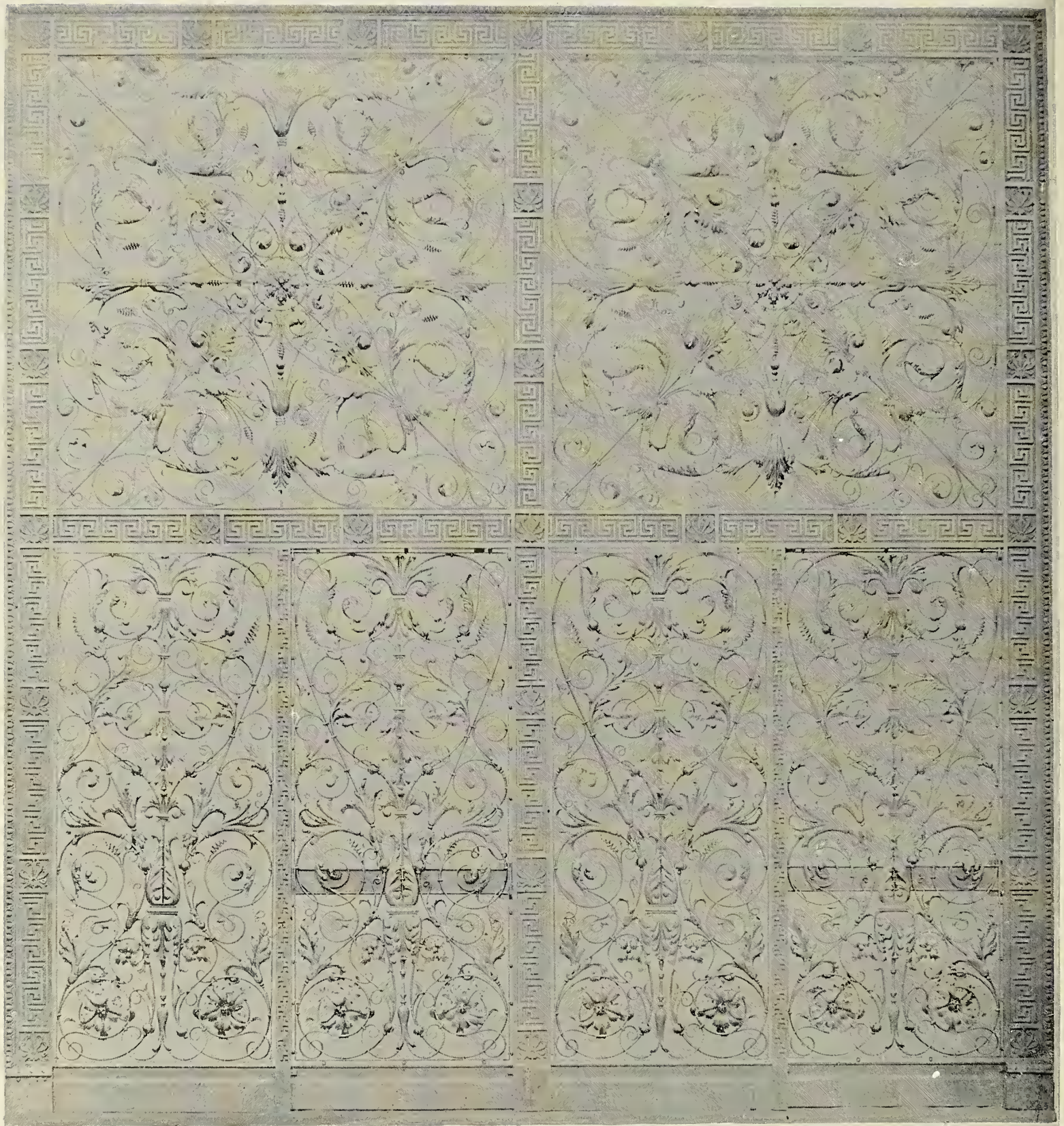


FIRST CHRISTIAN CHURCH COVINGTON KY.
DITTOE & WISENALL ARCHITECTS.
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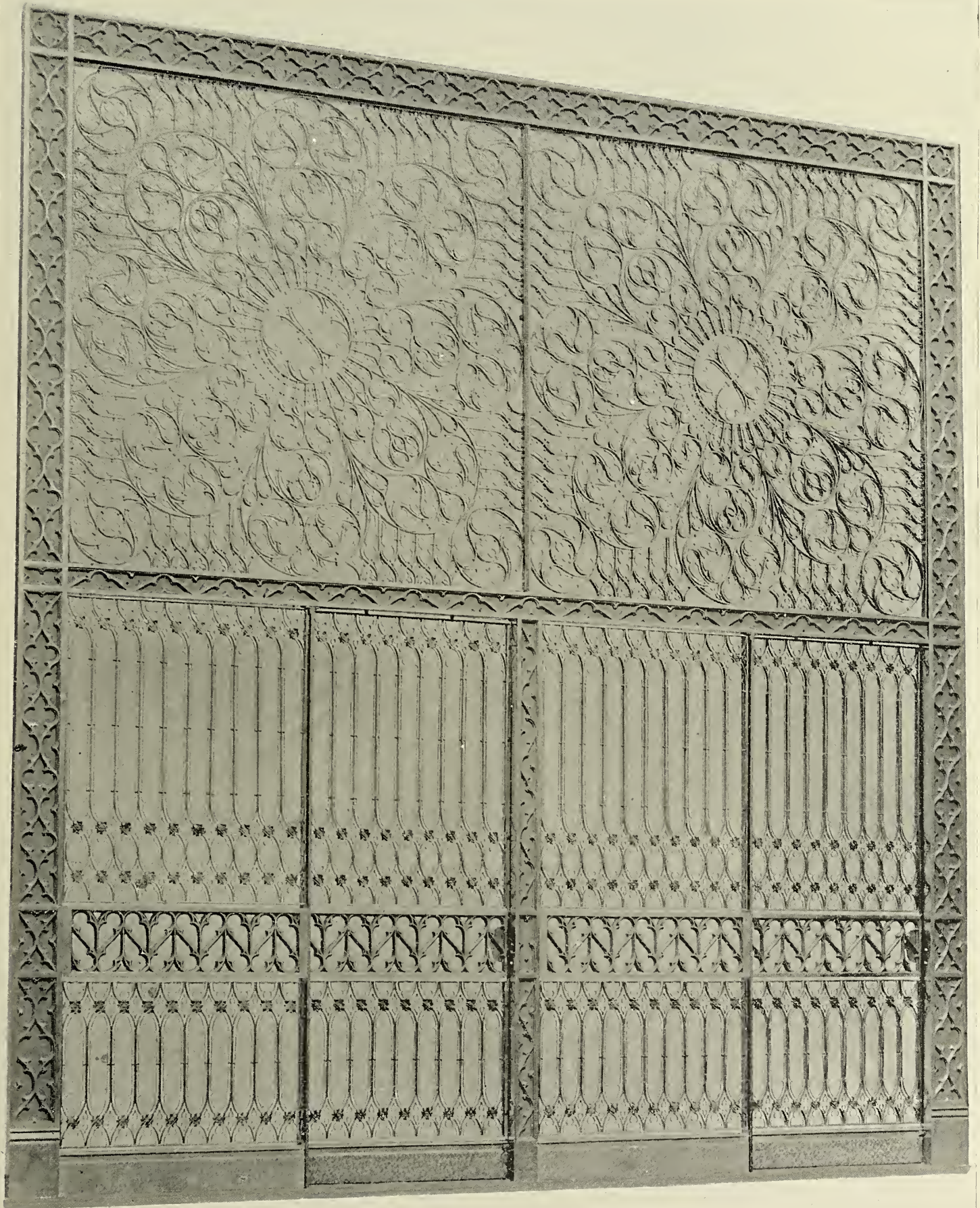


INDUSTRIAL SERIES.

ATHLETIC CLUB BUILDING, CHICAGO.

HENRY IVES COBB, ARCHITECT.

Elevator screen, first story, 14 feet high by 13 feet wide. Hand-forged and hammered wrought-iron grilles in cast-iron frame, finished in electro-plate copper. Made by **THE SNEAD & CO. IRON WORKS**, Louisville, Kentucky, and Chicago, Illinois.

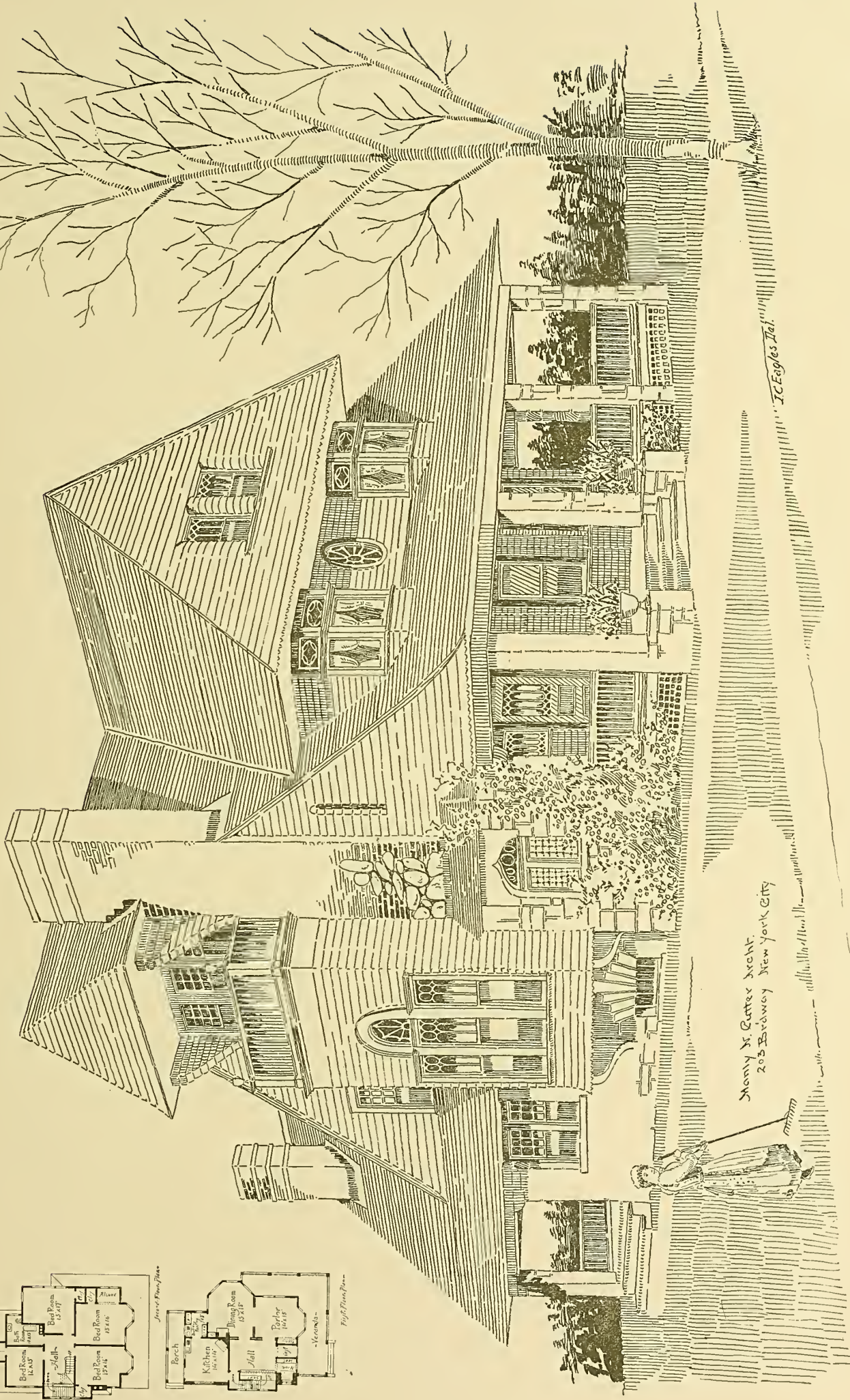
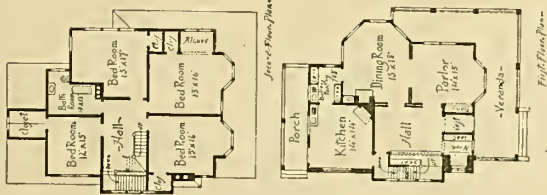


INDUSTRIAL SERIES.

ATHLETIC CLUB BUILDING, CHICAGO.

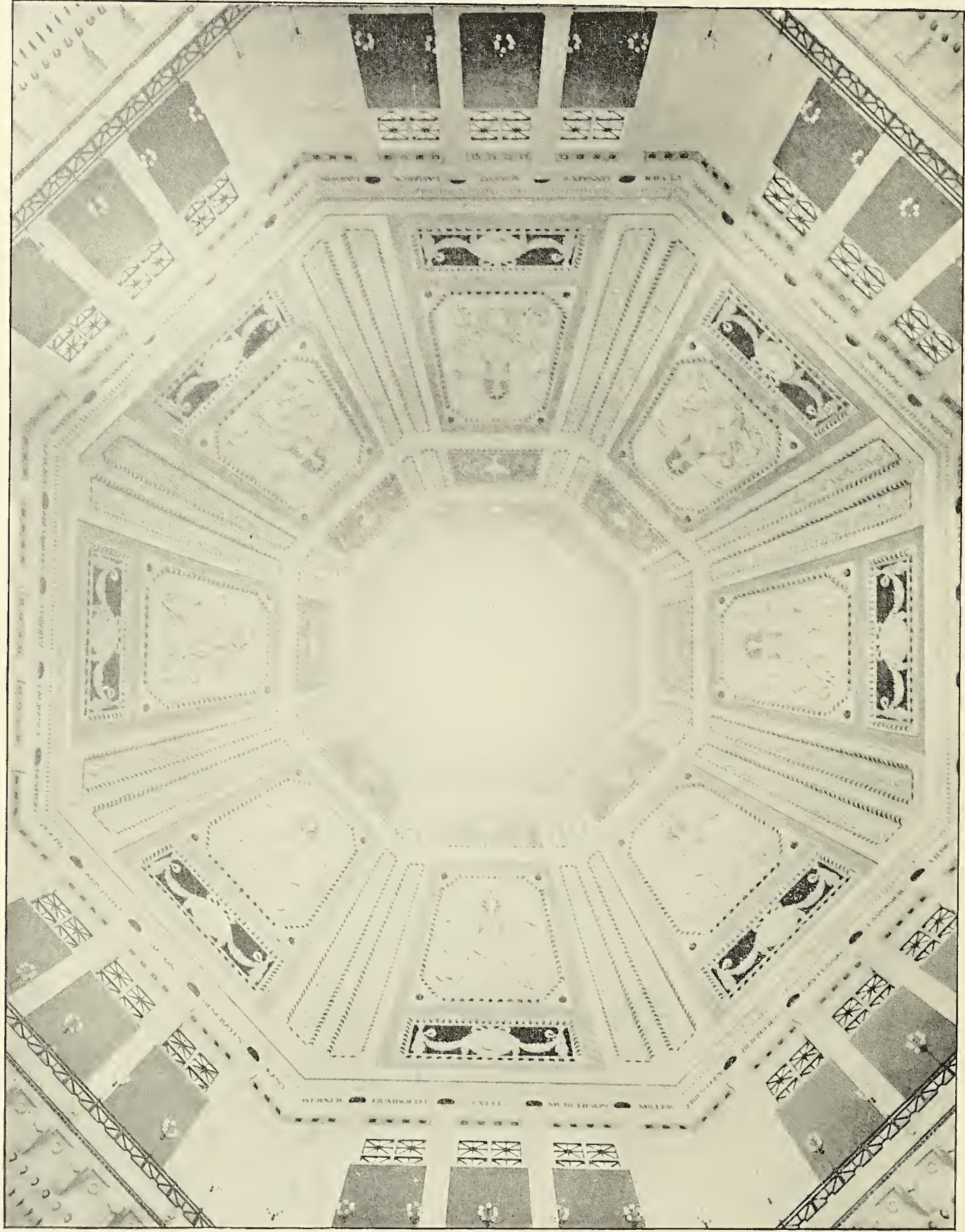
HENRY IVES COBB, ARCHITECT.

Elevator screen, second story, 14 feet high by 13 feet wide. Wrought-iron grilles in cast-iron frame, finished in electro-plate copper.
Made by **THE SNEAD & CO. IRON WORKS**, Louisville, Kentucky, and Chicago, Illinois.



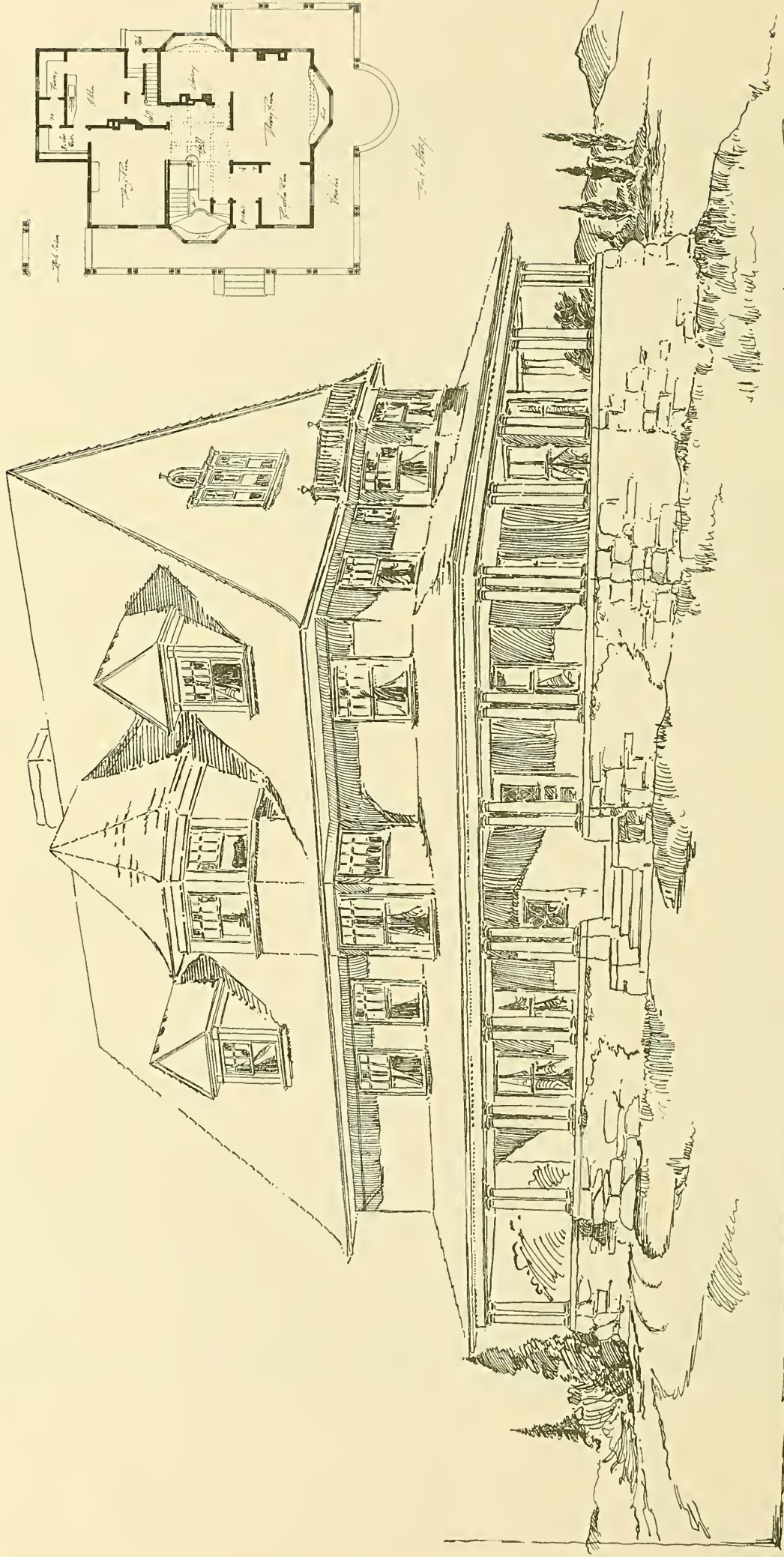
Mrs. M. Carter Wright.
205 Broadway New York City

J. C. Eagles, Ill.



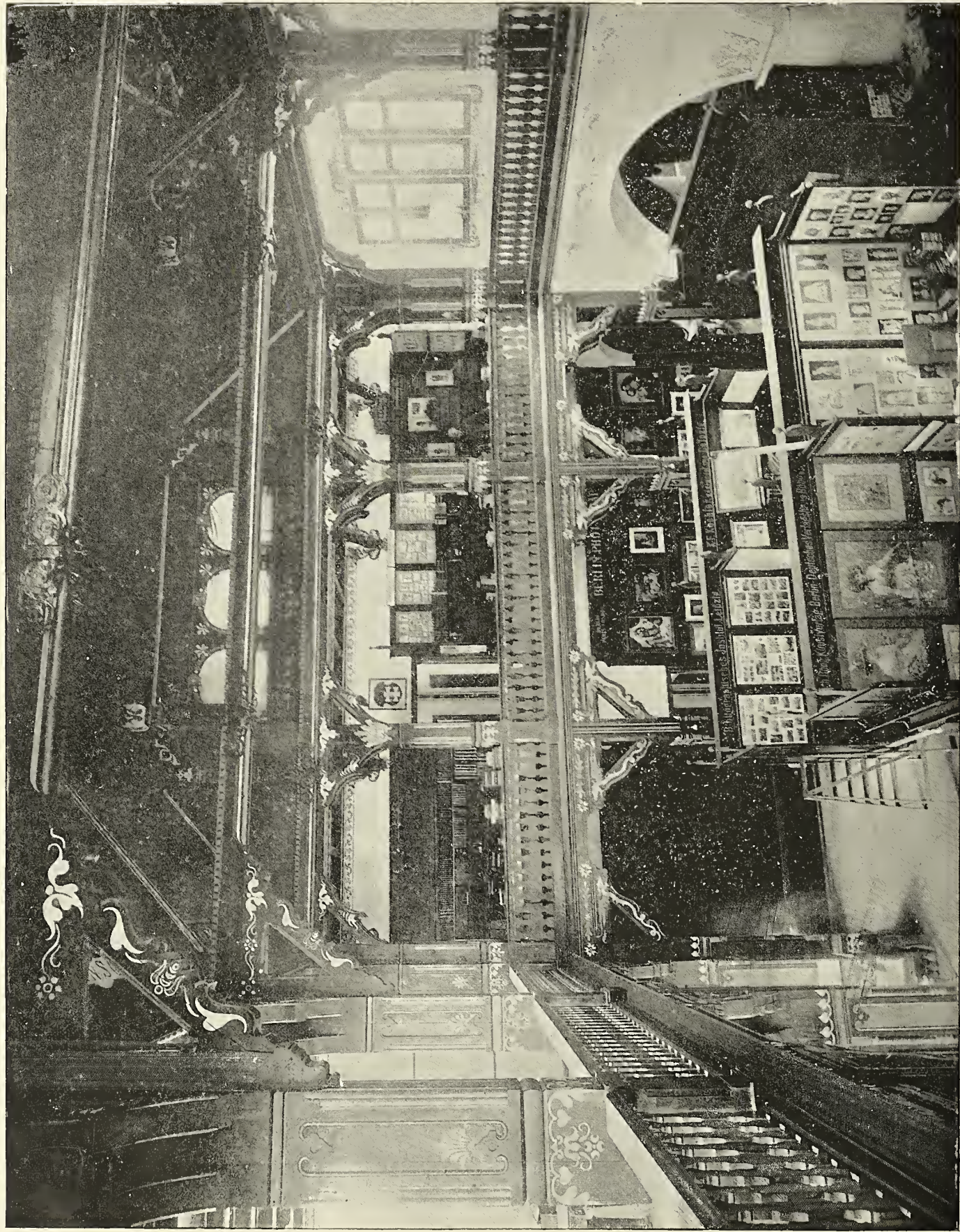
INTERIOR DECORATION OF DOME, ADMINISTRATION BUILDING, WORLD'S COLUMBIAN EXPOSITION, CHICAGO.

RICHARD M. HUNT, ARCHITECT, NEW YORK. WILLIAM L. DODGE, DECORATOR.



Geo. W. Maher, Archt.

RESIDENCE OF J. W. WOODWORTH, KALAMAZOO, MICH
GEORGE W. MAHER, ARCHITECT, CHICAGO.



NORTH HALL IN GERMAN HEADQUARTERS BUILDING, WORLD'S COLUMBIAN EXPOSITION, CHICAGO.

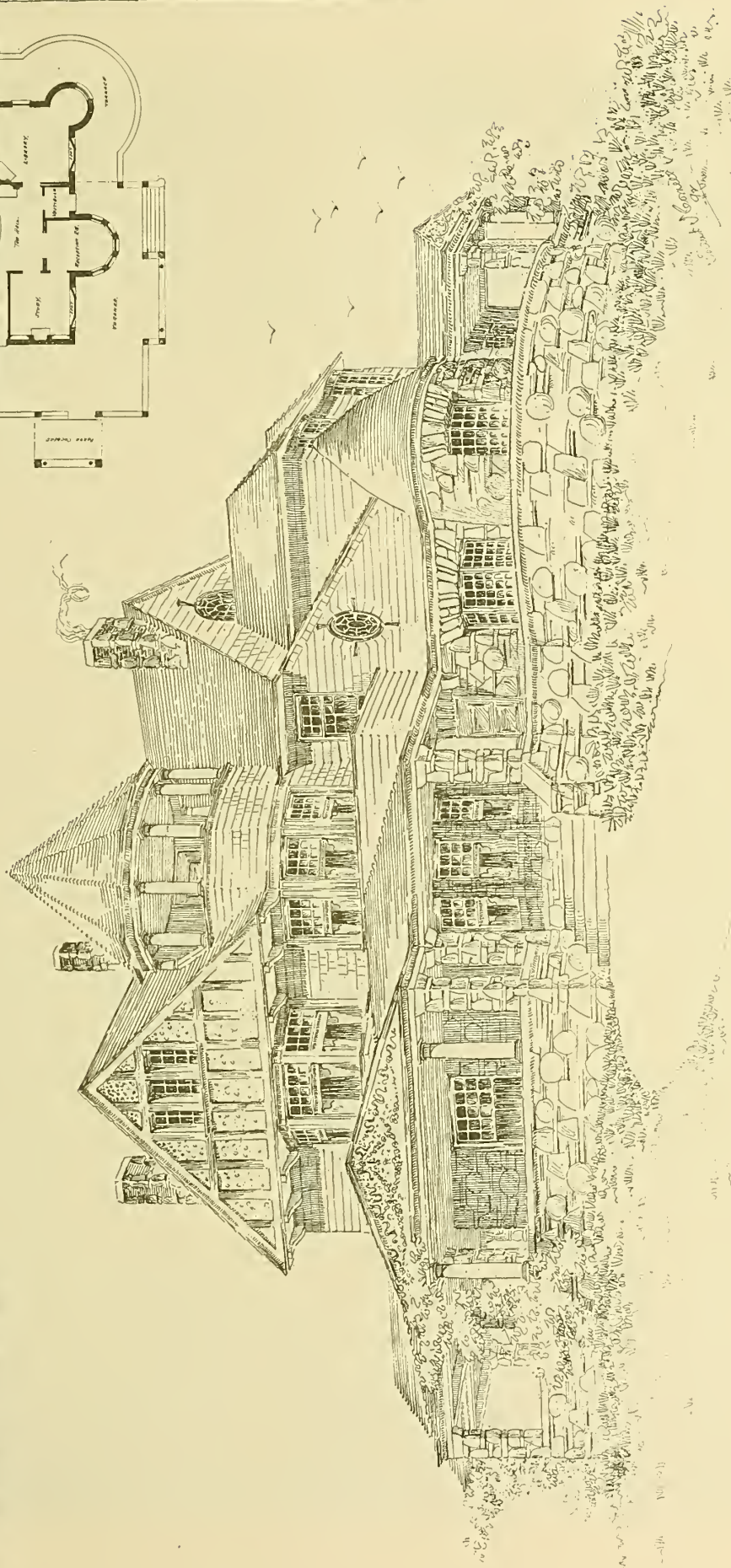
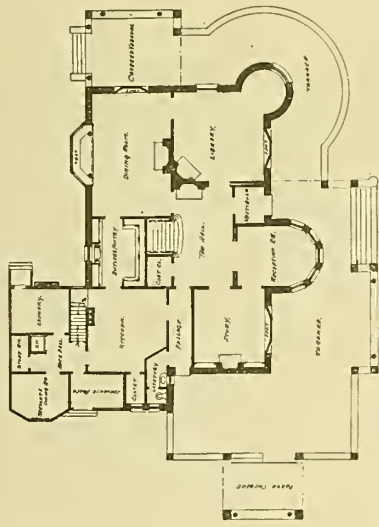
JOHANNES RADKE, ARCHITECT, BERLIN.

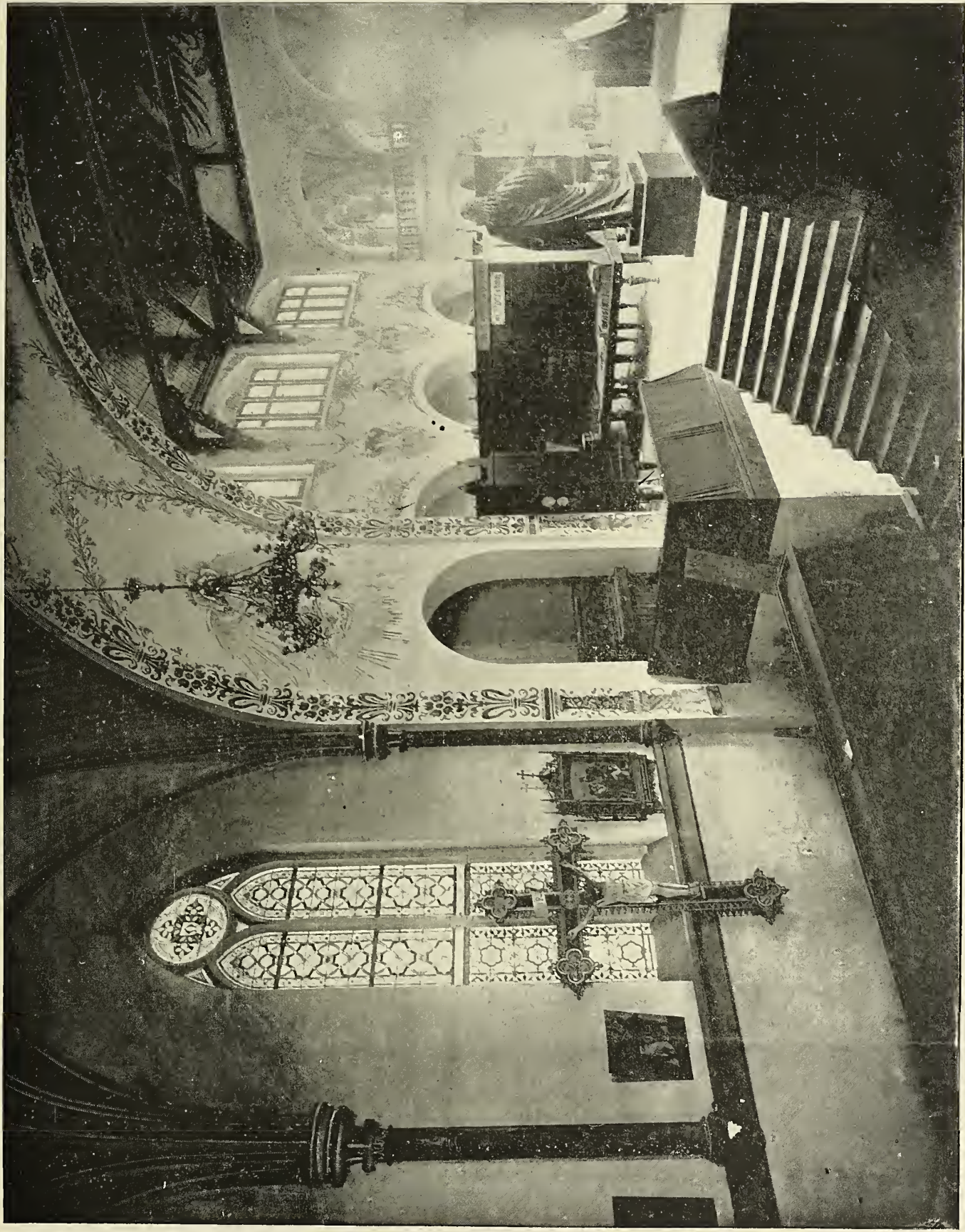


CHAPEL IN GERMAN HEADQUARTERS BUILDING, LOOKING TOWARD APSE, WORLD'S COLUMBIAN EXPOSITION, CHICAGO.

JOHANNES RADKE, ARCHITECT, BERLIN.

HOUSE AT PORT HENRY.
ON LAKE CHAMPLAIN.
FRANK T. CORNELL ARCHT.
121 E. 23RD ST. NEW YORK





CHAPEL AND ENTRANCE HALL IN GERMAN HEADQUARTERS BUILDING, LOOKING EAST, WORLD'S COLUMBIAN EXPOSITION, CHICAGO.
JOHANNES RADKE, ARCHITECT, BERLIN.

THE INLAND ARCHITECT AND NEWS RECORD

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No. 6



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Need for an Artists' Memorial Building.

Some years ago a suggestion came from one of the most prominent architects in the country that should be revived at the present time. This was the erection at Washington of a memorial building to artists, sculptors, architects, and those who have made a name in the arts and in literature. The architects, artists and sculptors have in the past year completed a work that has at once elevated this country in the eyes of the world from the level of commercial ignorance to the high plane of artistic intelligence. Their work at the Columbian Exposition was not a spectacle for the world to wonder at, but an exhibit of the high art education and perception this people have attained. Can it not be argued, therefore, that the country should recognize such services? And in what better way than by the erection of a memorial building that will gather its great ones in the arts as Westminster Abbey does the distinguished sons of England. We have been a people with no yesterdays, but it is time that we gathered something of today that is part of our greatness and placed it where it would remain a part of our activity in its example. Then, too, genius should receive its meed of recognition. The tribes of the North had their Valhalla, and we, their descendants, should establish a place of rest for our great ones who have given their best effort to the advancement of civilization, those who have made two blades of grass grow where one grew before.

Our World's Fair Photo- gravure Illustrations.

With the present number our special series of World's Fair Photogravures is completed. In these we have endeavored to illustrate the architecture of the buildings of the World's Columbian Exposition, the states, foreign countries and exhibitors, in a way to make it intelligible to such architects and amateurs as were unable to visit Chicago. We do not claim to have given a comprehensive view of the Fair or its architecture, which the size of this or any other journal would not permit, but mindful of the extent of our capacities have made a careful selection of such views of what must soon pass out of existence as are worthy of record and will be of interest to future investigators. The subjects have been selected and the descriptions written by an architect of experience, who was obliged to be on the ground during nearly the whole time of the exhibition, and had seen most of the buildings erected. In order to get as much as possible into the limited number of views that we have published, all general views, and pictures of the large buildings were avoided. It was assumed that these would be so extensively illustrated in popular publications, that all intelligent persons would be familiar with them, and it would not be wise to crowd out interesting views of details for their sake. Only parts of the large buildings have been shown, and those parts which are of most interest in their proportions and details. We have endeavored to illustrate the best that is in them, and from the best points of view. A large number of our subjects have never been photographed by others or even by the official photographer for other than our own use, and the negatives all belong to the Inland Publishing Company. We doubt not that many who visited the Exposition have

been surprised to see some of our views and wondered that they had never seen the originals; for we have searched in many secluded places for whatever will be valuable to fix on paper, and the merit of the objects has been the sole reason for their selection. Our readers will be able to realize from what we have done that the architectural glories of the Fair were not all in the Grand Court, and that there were many buildings of great merit in other styles of architecture besides those selected for the great show buildings. Much of this good work was inconspicuous, but it served to illustrate many of the phases of contemporaneous architecture, and the fact that architectural art is progressing in more directions than that which was made so prominent.

**The Loss of
Sculpture
at the World's
Fair Fire.**

The fire which destroyed the Columbus Arch, Peristyle, Music Hall and Casino, has left the east end of the Grand Court open to Lake Michigan, and the observer, standing in front of the Administration building sees nothing to intercept the distant view but the Statue of the Republic rising out of the water, which is now shown to better advantage than ever before. From this point no ruins are visible, for the destruction was complete. The great buildings on each side still stand in all their pristine beauty, and are not crumbling with the ravages of a wintry climate. A new perspective is now obtained, and the Court of Honor takes on a new aspect, making it again an object of interest, notwithstanding the loss that has occurred. We have heretofore given the opinion that the Columbus Arch, or Water-Gate, as it is officially called, was the most interesting structure, architecturally (after the Administration building), in the main group and the best of Mr. Atwood's works. It was such a monument that, if not preserved for as long a period as possible, ought to be reproduced in permanent materials. As the completion of the park will now be on a plan that will not be influenced by the location of the Peristyle, there is a location where the Columbus Arch could be reproduced, with the grandest possible effect. It should be at the main entrance to the park from the Midway Plaisance, which is already a grand driveway, and serves the purpose for which it was intended, to connect Washington and Jackson parks. As such a suggestion as this could not be practically carried out for many years to come, the realization of one feature of the loss that has been sustained in the burning of the Peristyle becomes stronger day by day. And that is the sculpture that adorned the Arch. This consisted of the famous "Quadriga," representing Columbus in triumph in a four-horse chariot, which surmounted the top of it, the work of French and Potter, and the four groups of allegorical figures attached to the main piers of the arch, by Bela Pratt. In addition there were 128 statues on the pedestals of the main balustrades that surmounted the Peristyle, Music Hall and Casino, being enlarged reproductions of four figures modeled by Theodore Baur. All are gone forever. There are no full-size molds or models for any of these in existence except for the four figures by Baur. The Quadriga and groups on pedestals were enlarged and built up from small models which fortunately are still in existence. It may be of interest in recording this loss to know that the Quadriga cost the Exposition \$17,174, which included the modeling by French and Potter of the groups of domestic animals with their attendants, that were reproduced at the boat land-

ings, and are still in existence. The four groups modeled by Mr. Pratt cost \$6,685. So the loss of sculpture with the Arch alone was \$23,859. The additional loss of the 128 figures on the Peristyle, Music Hall and Casino, represents an outlay of \$17,520. But these were all reproductions. However, it is worth recording, as showing the extent of sculptural adornment on the World's Fair buildings, that this fire destroyed what originally cost \$41,379. But the park commissioners have plenty more on hand. Around the basins and lagoons alone, without regard to the buildings, are the animal groups, by Kemys and Proctor, which cost \$13,241; those of French and Potter, which cost \$23,861, and the MacMonnies Fountain, which cost \$50,000, or a total of \$87,102. With the exception of the sculpture of the fountain these were all carefully painted and wrapped up to protect them from the weather before the park was returned to the custody of the commissioners.

**Supervising
Architect's
Bill
Passed.**

Under a misapprehension of the facts we have urged upon the architects of the country the necessity of securing the passage of the supervising architect's office bill. We succeeded in resurrecting the fact that the bill in question was passed and signed by President Harrison, it being one of his last official acts. The knowledge was not locked up, but was conveyed to the members of the Institute in a circular issued last February by Secretary Stone, and printed in *THE INLAND ARCHITECT* for March. It was probably a "Florida Enchantment" that prevented the writer reading that report upon his return from that country in April. The matter ended there with the Institute, it not being even mentioned in the report of the president at the last convention. It now transpires that there are difficulties in the way of the law being put in operation. The government, it is said, is making no contracts for building or pushing work other than that absolutely necessary, that the secretary of the treasury and the supervising architect are hostile to the law, and that only the warm support of the president can be looked for in the official family at Washington. It is hard to believe that Mr. O'Rourke is opposed to the measure, and Secretary Carlisle has heretofore been friendly to the measure, but as it is with these gentlemen that the operation of the law rests and as it has been dead as a door nail for the year since its passage, there must be some grounds for the rumor. The directors of the Institute evidently took action at the annual meeting last week, and the sending of a letter to the secretary of the treasury will probably bring this much needed reform to the surface. We have strongly urged the necessity of its passage, and now that the law has been discovered to be already on the statutes we reiterate everything that has been said and further urge the Chapters to support the Institute in its effort to have its provisions become the rule for the designing of public buildings.

**Milwaukee
Library
and Museum
Competition.**

The competition for a five hundred thousand dollar library and museum for the city of Milwaukee has been decided. Seventy-four sets of plans were submitted. Professor W. R. Ware adjudicated the drawings and selected five designs. The joint boards of the library and museum selected Ferry & Clas, of Milwaukee, one of the five pre-miated, as their architects.

DIRECT METHODS IN ARCHITECTURAL PERSPECTIVE.

BY CHARLES E. ILLSLEY, A.M., C.E., ARCHITECT.

CHAPTER VIII—Continued.

ANOTHER direct mode of subdividing the side wall to correspond with the front wall is as follows: Select any portion, as $v\ i$ of the indefinite extension of $v\ e'$, and subdivide it proportionally with the front, or with $A\ B$. Through the points i and w' draw a line to the horizon at V' , and from V' as a center draw radial lines as before to the points $1, 2, 3, 4$, etc. These lines will cross $v\ w'$ in the required points for its piers and arches. Of course these last points will coincide with those previously found; their failure to do so would indicate an error in the drawing.

125. As it is often necessary to divide one line proportionally with another, a method of doing this is illustrated in Fig. 125.* $A\ B$ is the original line; $A\ C$ is to be divided proportionally with it. From either end of $A\ B$ draw $A\ C$ at any angle. Join $B\ C$, and through each point in $A\ B$ draw a line parallel with $B\ C$ to cut $A\ C$. Lines parallel with the base of a triangle divide its sides proportionally, hence $A\ C$ is divided proportionally with $A\ B$. The divisions on $A\ C$ may be transferred by a slip of paper to the line it represents.

126. The expedient used in subdividing the line $v\ w'$ (Section 124) is of great service in perspective. It involves a principle whose full development must be deferred to another chapter. As here illustrated the explanation is as follows: The line $v\ w''$ is an extension of the horizontal line $v\ e'$, while $v\ w'$ is the perspective of a receding horizontal line corresponding with $v\ e'$. Both represent horizontal lines, whence the triangle $v\ w'\ w''$ represents a horizontal surface. Such surfaces all vanish in the horizon (Section 79), and, if any line in a perspective horizontal surface be produced to meet the horizon, the point of intersection is the vanishing point of perspectives of all parallel lines. Vice versa, if from any point, as V or V' in the horizon, radial lines be drawn, they will be perspectives of horizontal lines parallel with each other. Hence (Section 125) the perspective lines drawn from V or V' divide $v\ w'$ proportionally with $v\ w''$ or with $v\ i$ respectively.

From the above it will appear that any length of line along $v\ w''$ will answer. It is simply necessary that $v\ w''$ shall be horizontal, and shall lie in the picture plane or parallel with it, that it shall connect at one end with the perspective line which is to be subdivided, and that a line shall be drawn from its free end through the point w' and continued to the horizon.

127. In subdividing the second story of the perspective side wall another serviceable expedient is employed. The front wall, as previously explained, is simply a front elevation constructed in the usual way. This is to be reproduced twice on the side wall, which is twice as long as the front wall. Draw the slant line $x''\ x$ across the front from x , at the middle of the end pier. On the side wall extend the vertical from v''' to the line of window heads at x''' . Join $x''\ x'''$ and $x''' w$. These are perspectives of slant lines corresponding with $x''\ x$, excepting the reversed inclination of $w\ x'''$. Mark the points $1, 2, 3, 4$, etc., where $x''\ x$ crosses the pier lines in front, transfer these by horizontals to the corner $x'\ x''$, and thence by normals across the side wall. They cross the slant lines $x''\ x'''$ and $w\ x'''$ in the points required for the side windows corresponding with those in front. The direction of $x''' w$ is reversed in order to bring the whole pier at w and the half pier at x''' .

128. The base lines of the reveals of the front openings are obviously normal. The verticals $l'\ l''$, etc., are projected directly from the points l and m in the plan below. The base lines for the reveals of the side openings are horizontal both in plan and elevation. The verticals which limit the reveals in the side wall are concealed, as an attempt to project them will show, by the proximate corners of the same openings.

The second-story walls are to be of two-thirds the thickness of the lower story. Along the right-hand corner of the right pier in front lay off from e' upward any distance three times, as shown, draw normals across the reveal from the two upper divisions and a slant from e' to the end of the upper normal. This slant cuts the second normal at two-thirds the thickness of the pier back from its face. From this point is projected the vertical back edge of the reveal for the right-hand window in the second-story front. A horizontal from the base of the line last drawn cuts the normals already drawn at the base of all the second-story front piers in

points whence rise the back edges of their respective reveals. The reveals over the transoms are found in like manner.

129. For the front steps draw through the middle of $b\ c$ on the plan a normal $z''' z^4$. To the right of c , on the line $A\ B$, lay off the true width to scale of two steps, and by diagonals transfer these to the normal $m\ c$ produced, also draw horizontals through the points so found on $m\ c$, and normals as shown at the right ends of the steps. These form the plans of the half-flight at the right. In the elevation at the center of the opening draw the vertical $z\ z'$ down to the base line, divide into thirds and draw normals through the two lower points. For the front of the steps project verticals against these normals at z'' , etc., from points in $z''' z^4$, where crossed by the perspective plans of the steps. Through the points so found draw horizontals and normals as shown for the right half of the elevation of the steps. For the left half, duplicate with the dividers the half already drawn, and finish by horizontals, normals and verticals, as shown.

The treads of the two steps within the reveal of the archway are laid off along $b\ c$ to the left of c in the plan and transferred by diagonals to $m\ c$, thence projected up to meet normals from the heights of the risers marked on the corner $c^4\ c''$ of the right pier.

For the inner flight the perspective plans of the two lower steps are drawn in the normals $5, 6$, etc. Lay off its entire width with buttress along the inside of the front wall on the plan below, transfer by diagonal to the point 6 on the normal $5\ 6$, then project up against the normal which designates in the elevation the bottom of the lower riser. Lay off along $b\ c$, as shown, the widths of two treads, transfer by normals to a horizontal through 6 and project up in the risers shown. Lay off the height of the first riser on $c^4\ c''$, transfer to m' by a normal, thence by a horizontal and another normal to the back of the steps in elevation. Repeat twice on the line of the first riser its height and transfer to the other risers as drawn. Complete by normals as shown.

130. Fig. 126 illustrates another mode of transferring distances from a front line $A\ B$ in a horizontal plane, to a normal receding line $A\ E$. Draw an auxiliary normal $B\ F$, transfer the points on $A\ B$ to $B\ F$ by diagonals, thence to $A\ E$ by horizontals (Section 104). To repeat this process, transfer from $A\ B$ to $C\ D$ by normals, then by diagonals and horizontals to the right and left as before. This method is available when $A\ B$ is symmetrically divided or when the divisions on $A\ C$ are required in the reverse order of those on $A\ B$.

When $A\ B$ is not symmetrically divided and the order from A to C is to be the same as from A to B the method shown in Fig. 127 applies. Transfer the points on $A\ B$ by normals to the line $A\ D$, thence by horizontals to $A\ C$. This makes the order from A to C the same as from A to B .

131. Fig. 128 illustrates a mode of transferring subdivisions on elevations.† Here the side wall $A\ C\ E\ F$ corresponds to three rooms of equal width, each room with a pair of windows similar to those in the front wall. To divide $C\ E$ into thirds, lay off any distance three times on $E\ F$ produced, as at a, b, c , draw normals through b, c , to meet a slant line $A\ C$, and from the points of intersection drop verticals $b'\ b'', c'\ c''$. These divide $C\ E$ in thirds and indicate the centers of the partitions between the rooms. Carry across the side wall two normals for the lines of window sills and heads obtained from the front elevation, and draw the slant diagonals $d\ c'', d'\ b'', d''\ c'', d''' b''$. Join C with the center of the front pier $B\ D$, draw parallels therewith from the lower corners of the front windows, to cross the corner $A\ C$, and transfer these points to the slant lines in the side walls by normals as shown. These intersections mark the divisions for side windows corresponding with those in front.

The slant line $b''\ d'''$ is in a reverse direction from $d\ c''$, in order to bring the half pier at b'' and the whole pier at the end d''' . Of the slants $b''\ d', c''\ d''$, the upper portion only is used. This is necessary to obtain half piers instead of whole ones at each side of the centers b'', c'' .

132. In Figs. 129 and 130 a side wall is designed without reference to a front, and mainly without vanishing points except for the normals marking the lines of window sills and heads. In Fig. 129 a window is required at the rear end, $C\ D$, of the same size as the front window and at the same distance from the corner, and a similar window midway between the two.

† It will sometimes happen that the vanishing points $S, V\ l, V\ r$, etc., fall beyond the limits of the printed cut. At this stage the reader is presumed to be so familiar with normals and diagonals (Section 104) that the omission of the vanishing points in an illustration will cause no embarrassment.

*For diagrams 123 and 125 to 133, inclusive, see insert pages in this number.

Find t , the center of the wall, by the slant diagonals $A C$, $B D$, produce the line $a b$ to meet $B D$ in e . Transfer e and w , where $B D$ crosses $a e$ and $c d$, to e' and w' on $A C$, by the normals $e e'$, $w w'$. These are the required points for the sides of the end window. For the middle window draw a vertical $t h$. Find the center f , of the first window, by slant diagonals and drop a vertical $f g$. In like manner find the center of the rear window and drop the vertical $s m$. Join $m h$, $g h$. The latter line crosses $c d$ at k . Lay off $c l = d k$, and draw through l a normal; it cuts $g h$, $m h$, in $u v$, which are the points required for the center window.

In Fig. 130 the same problem is solved by slant diagonals. From the lower corners of the first window draw through b , the center of the wall, slant diagonals as shown; they meet the line $a a$ of window heads in the points required for the end window. Through b draw a vertical $c b e$; this marks the center point of the head and sill of the middle window. Mark corresponding points in the first window by a vertical, $d f$, through its center (at the intersection of its slant diagonals, as drawn).

Join $e d$, $c f$. They cross at g , which therefore is perspectively midway between $c e$ and $d f$. Slant lines through g from the lower corners of the front window, meet the line $a a$ in the upper corners of the center window required. The reveals of these windows are not drawn, in order to avoid confusion.

133. When the points $V r$, $V l$ are inaccessible, what may be called a "Divided Distance" is convenient. This is illustrated in Fig. 131, where S is the point of sight, and $V r$ is one point of distance. $A B C D$ is a perspective square, the length $A B$ being transferred to $A D$ by the diagonal $A C$ toward $V r$ (Section 106). Section 103 explains why $V r$ is called a "Point of Distance." The line $S V r$ is often called "The Distance" also, since it denotes the distance of the observer from the object. The middle of $S V r$ thus becomes the "Half Distance" (designated $\frac{D}{2}$), and the middle of $S \frac{D}{2}$ is the "Quarter Distance" (marked $\frac{D}{4}$), etc.

It will be seen in Fig. 131 that if we take $B a = \frac{A B}{2}$ and draw a line from a to $\frac{D}{2}$, it will pass through the same point C in which the diagonal $A V r$ crosses $B S$, also that a line from b at one quarter of $A B$ drawn to $\frac{D}{4}$ passes through the same point C . This is not an accident but a geometric necessity. The vertical angles of the similar triangles $S C V r$, $A C B$ are equal and are bisected in each triangle by the lines $C \frac{D}{2}$, $C \frac{A}{4}$, from their common vertex to the middles of their bases, wherefore these bisecting lines form one and the same straight line; moreover it can be shown that the sum of the small angles at C , on one side of $D C a$, equals the sum of those on the other side, whence $\frac{D}{2} C a$ constitutes a straight line. A similar demonstration applies to $\frac{D}{4}$.

Hence with the half distance $\frac{D}{2}$ we lay out from B toward A one-half the true length of our desired perspective, and with the $\frac{D}{4}$ we use one-quarter of the true length. Again if we join A with $\frac{D}{4}$ we obtain a distance on $B S$ equal to twice $A B$, the same as found by a diagonal $D V r$. This gives the rear corner of a second square, duplicating $A B C D$. Again, joining A with $\frac{D}{4}$ we obtain a point on $B S$ distant four times the length of $A B$. This gives the rear corner of a fourth square like the first, and, dividing by cross diagonals as shown, we obtain the third square.

134. Fig. 132 shows the use of the Divided Distance in subdividing a vertical wall $A B C D$. The point S is on the horizon; D is vertically above S at the same distance to scale as the observer is from the plane of the picture, wherefore D is the vanishing point of lines in vertical planes making angles of forty-five degrees with the horizontal (or vertical). Hence D is the vanishing point for diagonals of perspective squares in vertical planes. Lay off on $A B$ the true span $a c$ of the first opening. Transfer by normals as shown to a' and c' . Draw $c' D$; this cuts $a S$ in the required corner of the first opening. If we take half the width, as $a b$, transferred to $a' b'$, and draw $b' \frac{D}{2}$ to the "Half Distance" we obtain precisely the same width for our perspective opening. Carrying b' and c' over to the next pier at $b'' c''$ we obtain a similar result from both $\frac{D}{2}$ and D . Afterward only $\frac{D}{2}$ is used.

The width of the piers is set off in true size at $A a$; hence d , where $c' D$ cuts $A C$, marks the distance for the second pier line $b'' c''$. In like manner d' locates the next pier, for, D being the vanishing point for $c' D$, $c'' D$, etc., these perspectives represent parallel lines, i. e., $c' d$ and $c'' d'$ are parallel in space. In using $\frac{D}{2}$ to locate the remaining piers it must be remembered that, since this is the "Half Distance," we must set off from A only half the required width of our piers, i. e., we must use $A e$ instead of $A a$. Drawing a normal $e S$, its intersections with each successive line from $\frac{D}{2}$ will give correctly the perspective widths of the successive piers.

135. PROBLEM VIII, FIG. 133.—To draw to scale a side wall thirty-one feet long containing three window openings six feet apart, the terminal piers being four feet wide, the central window being five feet wide by eight feet high, the other two being three feet wide, the wall being one foot thick. Here the half distance is shown: S is beyond the limits of the cut at the left.

At A lay off $A a =$ two feet, $a b =$ three feet, $b c =$ two feet: then $A a$ will be half the width of the first and last piers in the side wall $A B C D$, $a c$ will be the width of the central window, and $a b$ the width of the others. On $A D$ lay off $A d =$ three feet and $d e =$ eight feet. Through $a b c$ draw normals. A diagonal from A to $\frac{D}{2}$ will cut the first normal in a point which in perspective is four feet distant from a . Transfer this by a horizontal to a' on the base line $A B$. Continue this horizontal back to f on the normal from b , and through the middle of that part of this horizontal which lies between the normals from a and b draw a diagonal to D . This will cross the normal b in a point, g , which, transferred by a horizontal to the base $A B$, gives b' , the distant corner of the first window three feet wide.

From the point where $b' g$ crosses the normal through a , draw a diagonal to D : it will cut the second normal in h , which, perspectively, is distant from g by twice the width $a b$, i. e., $h g$ represents six feet, the width of the second pier. Transfer h to c' by a horizontal and produce $c' h$ to meet the normal from c . The normals through a and c are by construction five feet apart, hence a diagonal toward $\frac{D}{2}$ from the middle of that part of $c' h$ produced

which is intercepted by the first and third normals, will cut the third normal in a point k , which, transferred to d' on $A B$, gives a window $c' d'$ five feet wide. The pier $d' e'$ is obtained in the same way as $a' b'$, by a diagonal, through the point where $d' k$ cuts the first normal, and $e' f'$ and $f' B$ in the same way as $a' b'$ and $A a'$.

136. As a check find, by cross diagonals, the center, m , of the wall, and through m draw, from the base of the first window, cross diagonals to meet the general line of the window heads. The points so found coincide with those already obtained; hence their accuracy is confirmed.

For the thickness of the wall (one foot) draw a normal through l , the middle of $A a$, and project upward its intersection with the horizontal $b' g$. At the tops and bottoms of the windows in the elevation draw horizontals through the distant corners, which will limit the vertical reveals. The inside line of the wall, as seen through the windows, is a normal.

Where construction lines can be drawn solid (not dotted) without confusion, as in this and several preceding problems, that course will sometimes be preferred.

(To be continued.)

NOTES FROM OUR FRENCH EXCHANGES.*

POPULAR OR FOLKS' ORNAMENTATION.

SAVANTS, anthropologists, archaeologists, ethnologists and others are accustomed to class the human races according to what they term the cephalic index, a cranial measurement invented by them, and from which they cannot deviate. A people has so many centimeters of temple measurement; so far from the junction of the nose to the crown, etc. Hence they are dolichocephalic, brachycephalic, or some other "phalic," and when they are numbered, labeled and placed in glass cases, everything has, of course, been said. There could not, by any possibility, be more significant than the dimensions of their skulls!!

A Polish philosopher, Joseph Lelewel, who was an expert on ceramics, once proposed to name the different races of the earth according to the shape of their vases and jugs. He placed the

*Translated and arranged for THE INLAND ARCHITECT by W. A. Otis.

pottery of different nations in rows, analyzed them, and compared them with each other, drawing some very curious conclusions, insisting that "The history of ceramics is the history of the entire human race."

We would not go quite so far, but it does seem as if a study of the "people's ornamentation," as it is called, would be of very considerable use in the researches now going on into the origin of the different races. It was on visiting the "Exposition of the Feminine Arts" that that idea was especially strengthened. This popular ornamentation, so disdained in France, is, in certain foreign countries, greatly appreciated. In Austria, among others, there are everywhere established municipal schools for their special study, and at Vienna the Imperial Museum of Art and Industry has made a collection of the embroideries, necklaces, jewels, and headdresses of the peasants of the provinces belonging to the holy empire. In France we are taught in our schools only to draw Greek curios and keys, with egg and dart moldings, and when we know how to correctly trace these conventional signs on our moldings and designs, we are then "sharp shod" and ready to advance without fear! Fortunately below, or rather above, the school there is with us, as in some other nations, the people, who, having studied nothing, have remained in direct contact with that inspiration of true art, Nature. This exhibition shows how much instruction may be obtained from the single glance at the work, and proves in a truly astonishing manner how many valuable hints we architects, frequently called upon for motifs of decoration, might obtain from a more deep study of these novelties. A most remarkable series of Tcheco-Slav embroideries, sent by the city of Prague, occupies the place of honor. Glass cases filled with headdresses, mingled with bed curtains, neckerchiefs, corsages, jewels, infants' toys, and rich potteries, show a surprising wealth of invention. Flowers, flowers, always flowers, thrown upon backgrounds, now of red, now of black, or of white, but always with a marvelous artistic ability. The organizers of this exhibition have accompanied their cases with figures representing the peasant women of Moravia, Galicia, Bohemia, etc., which explain the uses of all the specimens of embroidery. All the history of the folk ornamentation from modern times back to its very beginnings, which seem to be Indian, are here classed in order, and the schools of the empire of the house of Hapsbourg have profoundly studied these collections and interpreted them with great talent and science. Also at this Exposition there is one especial hall devoted to our own popular ornamentation. The doorway even had inscribed upon it the pompous title, "National Costumes." But, alas! when one enters the room, nearly vacant of exhibits, it is with a blush, for here are three peasant costumes from Bourg, a few Normand and Poitevin headdresses, a collection of jewelry loaned by collectors, and a few paper images. Not a piece of the magnificent embroideries of Quimper, nothing from the mountaineers of Pny-de-Dôme, or from twenty other districts that might be mentioned, and which are known to us by the splendor of their antique costumes of years ago. While imperial Austria founds schools to study the arts of its peasantry, republican France has yet to learn the first rudiment. A few savant artists have, however, sought to discover the wherefore of the double volutes, the multiple crosses, the regular stone, with alternate leaves, etc., etc., which are encountered as well in Galicia and Middle Russia as in Wales, Cornwall, and Spain. They find certain similarities of taste, and hence probabilities of identity of race which are exceedingly surprising. By analyzing and classifying these forms of popular ornament they have made a kind of genealogy, proving that being neither Greek, Roman, Byzantine, or Merovingian, they go back to the primitive Aryan race and to India. So place together the artistic works of the peasants of all different countries and you will have before you, as said above, the history complete of entire humanity.

THE SCHISOPHONE.

A new instrument by the above name, which has just been invented by Captain Place, is described by *La Semaine des Constructeurs*, the object of which mechanism is to detect any fissures or flaws in the interior of a block of metal. The inventor has presented to the academy one of these machines, which is composed of a microphone combined with a mechanical tapper or knocker, and a sonometer. The schisophone will detect the difference of sound given out by a solid or a defective piece of metal, no matter how slight the defect may be.

CELERITE PAPER.—From the Celerite Paper Company, McVicker's Theater building, Chicago, we have received samples of their Celerite Paper. This is a substitution printing process and is closely allied to platinum printing, the most radical difference being that the resulting image is in silver. In our hands, once we understood the value of the bichromate solution, which was after the first trial, the paper works very well indeed, giving pure whites and fine gradation in the middle tones and deep shadows. We have seen specimens in the hands of other workers which were very good, so that altogether we can commend this to all who wish a mat surface paper that is moderate in price and good in quality.—*Photo-Beacon*. The peculiar qualities which recommend Celerite are that its tones are closely allied to the bromides and give a finish in surface and color similar to prints from copper plates in gravure and etching. Its easy manipulation and the facility with which any tone can be obtained or the effect regulated make it, to those who can draw away from the inartistic glazed effects of the gelatine papers and see the artistic value of natural surface and tones, an indispensable printing paper.

ANNUAL CONVENTION NATIONAL ASSOCIATION OF BUILDERS.

THE eighth annual convention of the National Association of Builders will be held at Boston, Massachusetts, on Tuesday, Wednesday and Friday, February 13, 14 and 16, 1894. The convention hall will be in Mechanics' building, on Huntington avenue, and the general headquarters for Monday and Monday evening, February 12, will be at the Master Builders' Association, 166 Devonshire street. The headquarters thereafter, during the entire convention, will be in parlors 11 and 12 at the Parker House, Tremont, corner of School street. The general programme is as follows:

PRELIMINARY MEETINGS.—A meeting of the directors of the National Association is called for February 12, at 10 o'clock A.M., in the rooms of the Master Builders' Association, 166 Devonshire street, Boston, Massachusetts. Provision has been made for meetings of all committees, standing and special, on February 12, at the same time and place.

BADGES.—The Master Builders' Association of Boston will provide distinguishing badges for all the cities represented in the convention, and therefore no badges need be provided by any of the filial bodies for their delegates or visitors.

INTERMISSION.—On Thursday, February 15, an intermission will be made in the programme of the convention, to give committees an opportunity to meet and consider subjects referred to them, and to afford delegates and visitors an opportunity to visit places of interest in and about the city without absenting themselves from sessions of the convention. The regular sessions will be resumed on Friday, February 16.

RAILROAD CERTIFICATES.—Delegates and others are reminded that certificates entitling the holder to return fare at one-third of the regular rates are useless unless signed by the national secretary and countersigned by the agent of the railroad companies. They should be presented to the secretary for signature at the earliest possible moment. (See Circular No. 2 on Transportation.)

SESSIONS.—The opening session will be called to order at 10 o'clock A.M., Tuesday, February 13; following sessions will be as voted by the convention.

RESOLUTIONS.—Resolutions must be presented in writing and in duplicate, both copies being signed by the parties presenting the same.

VOTING.—All votes, unless otherwise ordered, must be announced by the chairmen of delegations.

ENTERTAINMENT DURING THE CONVENTION.—It is the purpose of the National Builders' Association of Boston to arrange such entertainment as it has to offer to delegates and visitors, in a manner that will avoid the introduction of large events, which would require the simultaneous presence of all those attending the convention. This method will permit each delegate or visitor to accept the hospitalities offered, in an individual way, and to suit his tastes and convenience. Committees have been assigned so as to provide each delegation with special hosts whose only concern will be the entertainment of their particular guests in the way most attractive to them. Souvenir books will be given each delegate and visitor, in which will be found detail of entertainment plan. No banquet will be given, but a reception and smoker will be tendered the delegates and visitors on the evening of the day upon which the convention closes.

HEADQUARTERS.—Headquarters for Monday and Monday evening, February 12, will be at the rooms of the Master Builders' Association, 166 Devonshire street. After Monday, February 12, parlors 11 and 12, Parker House, will be open as headquarters for delegates and visitors throughout the convention.

LUNCH AT CONVENTION HALL.—The fact that the convention hall is at quite a distance from hotels where delegates and visitors have been recommended to locate, and that a return for lunch between sessions would therefore consume much time and interfere with the work of the convention, has caused the General Committee on Entertainment to provide a collation which will be served in the rooms immediately below the convention hall between sessions each day.

ENTERTAINMENT OF LADIES.—A committee of ladies has been organized for the purpose of entertaining any ladies who may accompany the delegates and visitors. The headquarters of this committee will be in parlors 1 and 2, Parker House, and visiting ladies are invited to meet the committee at these rooms as soon as convenient after their arrival.

ORDER OF BUSINESS.

Tuesday, February 13, 1894.—Morning Session.

Address of welcome, by Hon. Nathan Matthews, Jr., Mayor of Boston.
Annual address by the President.
Appointment of Committee on Credentials.
Recess.
Report of Committee on Credentials.
Roll call.

Afternoon Session.

Appointment of committee to report time and place of next convention, and to nominate officers for 1894.
Annual report of Secretary.
Annual report of Treasurer.
Reports of Standing Committees.
Reports of Special Committees.
Distribution of reports of Filial Bodies.
Submission and reference of Resolutions.

Wednesday, February 14, 1894.—Morning Session.

Roll call.
Submission and reference of Resolutions.
Discussion of reports from Filial Bodies, with the object in view of securing suggestions which will lead to improvements in the administration of Exchanges and the more effectual carrying out of the recommendations of the National Association.

Afternoon Session.

Address on "The Relations of Employer and Workman," by Hon. Carroll D. Wright, U. S. Commissioner of the Department of Labor.
Discussion of Mr. Wright's address, with the purpose of taking action looking toward the improvement of our form of Permanent Arbitration.

Friday, February 16, 1894.—Morning Session.

Roll call.
Discussion of the Uniform Contract, with the purpose of securing suggestions as to possible improvement of the form, it being understood that the only action which can be taken by the Association is to recommend our delegates to the "Joint Committee on Uniform Contract," to urge the adoption of changes, which, after discussion, may be approved by the convention.

Afternoon Session.

Report of the Committee on Resolutions, and action on same.
Report of Committee on Time and place of next Convention, and Nomination of Officers.
Election of officers.
Naming and election of directors for 1894.
Unfinished business.
Miscellaneous.

ADJOURNMENT.

MEETING OF THE BOARD OF DIRECTORS, A. I. A.

THE first meeting of the Board of Directors for the year was held in New York on Monday and Tuesday, January 8 and 9. There were present President D. H. Burnham, First Vice-president George B. Post, Second Vice-president Levi T. Scofield, Treasurer Samuel A. Treat, Secretary Alfred Stone, and Messrs. E. H. Kendall, R. M. Hunt, C. F. Schweinfurth, George A. Frederick, George W. Rapp, W. G. Preston, R. W. Gibson, W. W. Clay, J. F. Baumann, A. F. Rosenheim, James W. McLaughlin, W. S. Eames, W. C. Smith, C. F. McKim and Thomas Hastings.

The result of the last letter ballot was announced, and W. P. Gunther, of Akron, Ohio, and Clellan Waldo Fisher, of Worcester, Massachusetts, were declared elected, and the secretary announced the deaths of James P. Johousou, of Ogdensburg, New York, and Alpheus C. Morse, of Providence, Rhode Island. The resignation of J. C. Plant, of Minneapolis, because he was no longer engaged in the practice of architecture, was received and accepted, and a communication was received from the Buffalo Chapter in regard to the relation of the Chapters to the Institute, which was very fully discussed, and the whole matter was referred to a committee of five to report at a meeting of the executive committee, to be held at least sixty days previous to the next annual meeting, and they were requested to communicate with as many members of the Institute as possible and to report such changes in the by-laws as they deemed expedient. The chairman announced as members of this committee E. H. Kendall, New York city; R. W. Gibson, New York city; E. A. Kent, Buffalo, New York; J. W. McLaughlin, Cincinnati, Ohio; W. L. B. Jenney, Chicago, Illinois.

A communication from the Buffalo Chapter was received containing a woodcut purporting to be a representation of the proposed Federal Building for Buffalo from the Supervising Architect's drawing, "three clippings from the Buffalo *Courier*, and a series of resolutions concerning the Federal Building Law."

After an examination of the drawing and a consideration of the resolution and the newspaper clippings it was voted that the secretary be authorized to draw a memorial and resolution in regard to the Buffalo building, and that they be prepared to present the same to the board at its next adjourned meeting for consideration.

At the adjourned meeting held on the next day the secretary presented a draft of a letter to be sent to the Secretary of the Treasury, Hon. John G. Carlisle, which was referred to a committee—Mr. George B. Post, Mr. C. F. McKim, and the secretary—who subsequently reported a modified letter, which was unanimously adopted and signed by all of the general officers and by the members of the board present, twenty in all, and forwarded to the Secretary of the Treasury by Messrs. Clay and Treat, of Chicago. The secretary was directed to send a copy of the communication to every Chapter of the Institute, with a request that they take such immediate action thereon as may seem to them best.

The board received and acted upon eighteen applications, and the secretary was directed to issue a letter ballot for the election of the following as Fellows of the American Institute of Architects: William Schickel, Frederick W. Perkins, C. P. Baldwin, G. E. Harding, J. W. Moulton, A. Page Brown, Joseph Wolf, J. H. Duncan, James Brown Lord, J. O'Connor, R. W. Gilbert, W. Chamberlin, J. S. Barney, W. T. Gooch, J. G. Stearns.

Mr. P. B. Wight having resumed the practice of his profession, was transferred from corresponding member, and was duly reinstated as a Fellow of the Institute. The following persons, upon the nomination of the president, were elected to act with President D. H. Burnham, Treasurer S. A. Treat and Secretary Alfred Stone, as members of the executive committee, namely: E. H. Kendall, C. F. McKim and R. W. Gibson, of New York, and W. W. Clay, of Chicago. It was voted to present the name of W. P. P. Longfellow to the next annual convention as an honorary member.

The matter of proposing J. S. Walker, of Samoa, as a corresponding member, was referred to the executive committee.

A communication of D. W. Gibbs, of Oklahoma, in reference to a change in the by-laws in regard to members incapacitated by ill-health from active professional practice, was referred to committee on constitution and by-laws.

By the vote of the last annual convention, New York was selected as the place for the next annual convention of the Institute, and the board appointed October 16 as the date for opening the same.

The appointment of a committee of arrangements was referred to the executive committee.

Messrs. R. M. Hunt, George B. Post and E. H. Kendall were appointed a committee to collect data with regard to the early organization of the Institute and its acts to the time of its consolidation with the Western Association of Architects, said committee to be empowered to supply a clerk, if necessary for the purposes.

The secretary was directed to print a form for Chapter reports.

Messrs. Post, Hastings and McLaughlin were appointed a committee to prepare rules to govern competitions, and to report them to the board of directors before the next annual convention.

Messrs. Napoleon Le Brun, T. M. Clark and Alfred Stone were appointed as members of a joint committee on better fire protection.

Mr. Kendall read a communication from Baron Von Geymuller on his proposed Thesaurus of Architecture, and urged that the subject should enlist the interest of the board and through them

subscribers be obtained from the public libraries and persons of wealth throughout the country.

Adjourned.

ALFRED STONE,
Secretary of the American Institute of Architects.

HOW THE A. I. A. APPROACHED THE COMPETITION AND COMPENSATION PROBLEMS.

IN an editorial in our December (1893) number it was incidentally mentioned (referring to the early experiences of the American Institute of Architects) that "two years after its organization, written documents show that the conservatism of the members was such that it was a matter of doubt whether such things as competitions and commissions could with propriety be discussed in its meetings." It was by the merest accident that some of these documents turned up, and, we think, there will be no impropriety after the lapse of thirty-three and a half years in publishing one of them, for it was fruitful of good results. It is a curiosity from the fact that it shows how gingerly the Institute approached the question. It is valuable as the work of one of the fathers of the Institute, now deceased, whose whole life and practice was an example of uprightness and character that all others may envy.

It seems that the Institute had been organized for three years under the preamble still adhered to, before anyone dared to suggest that the regulation of competitions and minimum rates of charges was any part of its business. When it was at last brought up, it was not even at a regular meeting, but an "informal" meeting was held lest the subject might appear on the records. It was at an informal meeting of the Institute, held June 5, 1860, that the subjoined report was presented. The number of the committee does not appear, but as another report was also presented, by a member who is also deceased, taking a somewhat opposite view of the subject, there must have been only two members, and their opinions were divided. As the first mentioned report was adopted and led to the adoption of the first schedule of charges, which was modeled after that of the Royal Institute of British Architects, it is of the greater interest. The members were thereby settled in their minds as to the propriety of "discussing" the subject. Their reserve was overcome, the ice was broken, and the result was not difficult to attain. They must have breathed easily when they were able to talk openly about rates of charges, without the fear of being called a trades union, or being classed with the vulgar mechanics upon whom they depended for the execution of their designs. When in after years the subject of rules for competitions was considered and acted upon, the analogy so clearly stated by Mr. Hatfield with such contests of pure skill as regattas, horse races, foot races and cricket must have carried the day. The argument in favor of *minimum* charges for work performed with a good degree of excellence, holds good to the present day and nothing can be added to the reasoning therein briefly and concisely given. It is well known that architects of great reputation are accustomed to charge higher rates than the schedule in many cases. The following is the document referred to:

Report of committee on the propriety of discussing before the Institute the question of "Establishing Rules for Competition and Compensation," reported to an informal meeting of the American Institute of Architects, June 5, 1860, by R. G. Hatfield, member of committee.

The question is not as to the propriety of *adopting* rules, but the propriety of *discussing* the question of the adoption of rules; or, whether it is within the province of the Institute to consider such subjects.

Among the objects for which the Institute was established is that of "combining the efforts of those engaged in the practice of architecture for the general advancement of the art," and, as a "means of accomplishing this, there shall be regular meetings of the members for the discussion of subjects of professional importance." Thus reads the constitution of the Institute. The question turns on this point, namely: Is the subject important? If it is, then it may be discussed. Would it be to the advancement of the interests of the Institute to establish rules? In order to answer this question it will be necessary to inquire the nature of the subject upon which it is proposed to establish rules. The subject is double: competition—compensation.

First, as to the nature of competition, does it require rules? Competition among architects resembles in a degree that exhibited in a regatta or on a race-course; it is a trial of skill by which the powers exercised are developed and strengthened. This has been found to be the result of all contests when conducted fairly and in accordance with established rules. Without rules no contests of this kind are entered into. Regattas, horse races, foot races, cricket and all contests which are calculated to draw upon the brain or muscle for an exhibition of skill or endurance—all have their well-established rules. In all these the contest is reduced to a system, the operations are like the movements of a nicely adjusted piece of machinery—all are conducted with order and system, except contests in that profession which has to do only with that which is based upon order and system. Strange inconsistency, that those whose daily duties inculcate regularity and method should have no established rules for conducting contests of genius and skill. From these considerations it may be fairly inferred that there should be well-established rules for the regulation of competition among architects, and therefore the subject is important and should engage the attention of the Institute.

Second, *Compensation*. What is the nature of this subject? Are rules required to regulate it? Compensation is to be equitable, should equal in value the work performed. Its value when considered not only as to its amount but as to its quality. As in other professions, the quality of the service rendered differs; the services of no two architects are alike valuable. One has been longer in the profession than another, and of those who have practiced a like number of years, one has had more business than the other, and again, of those who have had the like amount of business, one has superior talents to the other, so that the services of *all* differ in value more or less. Now, rules that are to be adopted for regulating the price for architectural services must, to be equitable, have reference to the quality of the service as well as the quantity. Hence, however desirable, yet how difficult, nay, how impossible, to graduate prices in accordance with the talents of the various members of the profession! From these considerations it may be shown that there cannot be fixed prices established that shall be alike binding on all members of the Institute without doing great injustice to some. Yet that there should be fixed rates agreed upon for the various kinds of work, when performed with a good degree of excellence, is undoubtedly true, and well-established members of the profession should be expected to adhere to them, and therefore the subject is important and may be discussed by the Institute.

NEW YORK, June 5, 1860.

MILWAUKEE LIBRARY AND MUSEUM COMPETITION.

THE conditions, names of competitors and the report of the expert employed to adjudicate the plans, William R. Ware, Professor of Architecture, Columbia College School of Mines, New York, in the late competition for a library and museum for the city of Milwaukee, Wisconsin, is as follows:

INSTRUCTIONS TO ARCHITECTS.

The joint Boards of the Public Library and Museum of the city of Milwaukee solicit plans and outline specifications for the new Public Library and Museum building to be erected on block 174 in the Fourth ward, in the city of Milwaukee, the dimensions and location, with the grades of the adjoining streets, location of sewers and water pipes being given upon the annexed plat.

Plans to be drawn to the scale of eight feet to the inch, and to be what is known as sketch plans.

The specifications to be a typewritten description of the building, giving as clearly as possible such information concerning materials, methods of construction and decoration as cannot be shown on the drawings.

The said plans to show the arrangement of all rooms, etc., on each floor, and to contain also a section of said building from basement floor to roof, showing the method of construction; also two perspective drawings, one showing the south and east fronts, the other the south and west fronts. The elevation of the nearest corner to be on a scale of eight feet to the inch.

The building is to be a modern structure, substantial, fireproof and ornamental, and adapted to the uses of the Public Library and Public Museum, and its exterior on Grand avenue, Eighth and Ninth streets, is to consist of stone of either of the following kinds, namely: 1st, No. 1 Portage red sandstone; 2d, No. 1 cream buff Amherst; 3d, first quality dark blue Bedford limestone; 4th, Berea sandstone, 10 feet ledge; 5th, Lake Superior brown sandstone, or stone and brick above the first story.

The foundation to the surface of the ground to be of good limestone.

It is to have three stories and a basement. The basement will be full size of building. The boilers for the heating apparatus must be located in a separate building.

The successful competitor will, if he so desires, be employed to furnish the detail and working drawings, and to superintend the erection of the building at the rate of compensation fixed by the joint boards.

All drawings to be in ink and to the same scale of eight feet to one inch. The perspectives to be without shading or landscape embellishment except a single human figure six feet high to indicate the scale.

The Public Library is to be located on the east portion of the ground, and the Public Museum is to be located on the west portion of the ground, and the ground space to be divided between the Library and Museum as equally as possible.

The plans of the basement are to be made as complete as possible in order that excavation and foundations may be proceeded with during the winter.

GENERAL REQUIREMENTS.

It should be especially required that every detail of the plans for ventilating and warming the building, for the arrangement and construction of plumbing, and for all, in fact, that pertains to the sanitary conditions, as well as for the natural lighting of the rooms, shall be such as is most certainly approved by science and experience.

The building should be of a pure style of architecture, befitting its uses, and impressive to the eye by beauty of proportion and harmony of lines rather than by showy ornament or eccentric features.

It should be of a fireproof construction, and all floors should be so deadened that noises will not penetrate from one story to another.

Wherever there are outside courts for lighting the interior of the building the walls should be faced with enameled brick of a light color, preferably a cream tint, in order to give a good reflecting surface that cannot become dimmed or be made ineffective by moisture.

NAMES OF COMPETING ARCHITECTS.

1. Appleton P. Clark, Jr., Washington, D. C.
2. G. W. Foote, Atlanta, Ga.
3. C. M. H. Vail, Ravenswood, Ill.
4. C. H. Eckert, New York, N. Y.
5. Wilson Bros. & Co., Philadelphia.
6. J. C. Worthington, Philadelphia.
7. A. T. Riley, Detroit, Mich.
8. Paulsen & Lavalie, Boston, Mass.
9. W. W. Lewis, Boston, Mass.
10. W. Frank Bower, Newark, N. J.
11. F. E. Edbrooke, Denver, Colo.
12. Wilson & Simon, Baltimore, Md.
13. Arthur H. Bowditch, Boston, Mass.
14. Wm. M. Kenyon, Minneapolis.
15. Lewis & Wocher, Chicago, Ill.
16. Austin Terryberry, Duluth, Minn.
17. Nettleton & Kahn, Detroit, Mich.
18. A. W. Hodgkins, Washington.
19. A. O. Elzner, Cincinnati, Ohio.
20. Stewart, McClure & Mullgardt, St. Louis, Mo.
21. Varney & Woolrych, St. Louis.
22. Frank H. Wright, Chicago, Ill.
23. Henry Ives Cobb, Chicago, Ill.
24. J. Spencer & Trowbridge, Chicago, Ill.
25. F. Velguth, Milwaukee, Wis.
26. Bertrand & Keith, Minneapolis.
27. Garden & Garden, Chicago, Ill.
28. Ginder & Brainerd, St. Louis, Mo.
29. C. W. Pomeroy, St. Louis, Mo.
30. C. L. Staub, St. Louis, Mo.
31. Henry A. Dumper, Brooklyn.
32. Ernest Flagg, New York, N. Y.
33. Hartung & Richter, Milwaukee.
34. L. G. Middaugh, Kansas City, Mo.
35. Chas. F. Whittlesey (Badger), Chicago, Ill.
36. J. E. O. Pridmore, Chicago, Ill.
37. Jacob Jacobi, Milwaukee, Wis.
38. Alex. Eschweiler, Milwaukee.
39. W. A. Holbrook, Milwaukee, Wis.
40. J. C. Morrison, Chicago, Ill.
41. Patton & Fisher, Chicago, Ill.
42. Traphagen & Fitzpatrick, Duluth.
43. R. C. Spencer, Jr., Chicago, Ill.
44. Hodgkins & Barrows, Chicago, Ill.
45. Rau & Kirsch, Milwaukee, Wis.
46. D. F. Kennard, Chicago, Ill.
47. Howland Russel, Milwaukee, Wis.
48. C. F. Ringer, Milwaukee, Wis.
49. A. J. Grenier, Utica, N. Y.
50. H. C. Koch, Milwaukee, Wis.
51. Ferry & Clas, Milwaukee, Wis.
52. Charles Fink, Milwaukee, Wis.
53. Andrews, Jaques & Rantoul, Boston, Mass.
54. Starbuck & Rose, Milwaukee.
55. Coulter & McCafferty, New York.
56. J. J. Ray Mulcahy, Boston, Mass.
57. William R. Gibb, Chicago, Ill.
58. Minneapolis Architectural Bureau, Minneapolis, Minn.
59. Gordon & Helliwell, Toronto, Can.
60. Nettleton & Weaver, Detroit.
61. Nicholson & Schugens, Rochester.
62. D. Schureman, Rockford, Ill.
63. Patrick A. Tracy, Boston, Mass.
64. Arthur Woltersdorf, Chicago, Ill.
65. W. D. Kimball, Milwaukee, Wis.
66. Radcliffe & Willoughby, Duluth.
67. Bosworth & Hunt, Chicago, Ill.
68. Gibel & Gaebler, Nashville, Tenn.
69. Ralph M. Hulet, Cleveland, Ohio.
70. Neal & Hopkins, Pittsburgh, Pa.
71. Alfred Bryan, Duluth, Minn.
72. J. Beeckmann, Rochester, N. Y.
73. John A. Moller, Milwaukee, Wis.
74. Boring & Tilton, New York, N. Y.

REPORT OF PROFESSOR WARE.

"I have examined the seventy-four designs submitted in competition for the Milwaukee Public Library and Museum, and have carefully studied those among them, about twenty-five in number, which seemed of most promise. Of these the five numbered 17, 50, 51, 53 and 74 seem to be on the whole the most acceptable, though none of these offer as they stand a perfectly satisfactory solution of the problem. Any of them, however, would, if subjected to certain obvious modifications, perfectly well answer the needs of the city, and provide a handsome convenient building.

"The necessity of thus changing the designs, in order to adapt them to the requirements of the case, arises in the main not from lack of skill and judgment on the part of competitors, so much as from their having mistaken the meaning of some portions of the paper of instructions, as in the case of the museum, or attached undue importance to the requirements which it now proves to have

been impossible strictly to follow without sacrificing other things more important, as in the case of the lecture room. This does not affect the merit of a design, as a solution of the problem presented, though it may make it unsuitable without alteration. This is especially the case in regard to the Museum, which some of the competitors have supposed to be intended for pictures and statuary, and for miscellaneous works of art, when in fact it is, in the main, a museum of natural history.

"The scheme best suited to such a museum seems to be a series of large rooms, occupying, one over the other, the whole of the wing assigned for this purpose, with no entrance from the side street. But as this was not especially stated in the instructions, and as it was impossible for the competitors to have known this, especially for those living at a distance, it would be unjust to reject the designs that embody a different idea, simply because it happens to be a mistaken one. Moreover, it would not only be unjust to the competitors, it would be contrary to the interests of the city, which it is the first duty of the committee to protect. To deprive the city of a design, in other respects admirable, because in certain particulars, which can easily be altered, it requires alteration, would be contrary to public policy.

"Now, this particular alteration can easily be made in the plans which are herewith presented that do not already show this arrangement. Three or four stories, with a large hall in each, as wide as the western wing, and nearly, if not quite, as long, can easily be provided in each of these designs, without materially disturbing the arrangements of the rest of the building. This being so, the question, which design best accommodates the museum, ceases to be an important consideration in choosing among them. All can be made to furnish just the accommodation that is most preferred. The designs which present this arrangement already, and accordingly do not require alteration, have, of course, a certain precedence, and stand first from this point of view. But if other designs are preferable, from other points of view, their mistake in this respect does not disqualify them from selection. Indeed, if such a rule as that were adopted, all the designs but one or two would have to be thrown out at once. It is not for the interests of such enterprises that any such rule should obtain.

"What has been said of the museum applies, though with less exactness, to the library. The trustees of the library know just what they want, but it was impossible for the competitors to know it with exactness. They had to work, for the most part, very much in the dark. Some have shown great skill, but have avoided just what is not, in fact, the desirable thing. Others have by hit or by wit, done almost exactly what was wanted. It is right that these again should have a distinct preference, and should not be set aside except for some paramount excellence, which other designs exhibit and they do not. This claim for consideration is stronger in the case of a good library plan, than in the case of a good museum plan, the library problem being a more complicated and difficult one, and the prospect of satisfactorily altering an unsatisfactory scheme being much less promising.

"Another particular which needs to be dealt with in a liberal spirit is the lecture hall. The competitors have been somewhat embarrassed by the requirement that it should be in a central position, and that it should be on the first story. It was difficult to meet these conditions in any way, and almost impossible to do so without making sacrifices that were very undesirable. In this case some of the competitors have spoiled their plans in a conscientious endeavor to fulfill the requirements, others have violated this requirement for the sake of the general good. In this case, again, a design should not be summarily rejected for either reason, and those that suffer from fidelity to the programme should, if otherwise acceptable, have the benefit of all possible alterations. Such alterations and transmutations are more practicable and more defensible in the present instance than is generally the case, because, by reason of the shape of the lot and of the peculiar instructions of the programme, the shape of the building is substantially the same in almost all the plans, and almost any of the internal arrangements could be placed within almost any of the external walls. But the most important element in a design is its architectural character, and this element is not susceptible of such manipulation. In this respect the different designs must be judged as they stand.

"The architectural treatment without and within is not open to such modification and substitution. It is something individual, and personal to the design and its author. The taste, skill, knowledge and judgment evinced by any one of these competitors cannot be transferred to another. In choosing among the designs submitted, this is accordingly a consideration of paramount importance. The object of a competition, indeed, is not only to secure a convenient and suitable building, but to secure evidence of the taste and skill of its designer. The exhibition of taste and skill, and of professional capacity and resource is, accordingly, a main consideration in choosing among the designs submitted. This cannot, of course, be transferred from one set of drawings to another. In a building like this, which is eminently a public monument, this consideration is of exceptional importance. This does not mean that there is no substantial ground of choice between these designs. It means that artistic considerations should, in such a building, have a certain precedence, since matters of practical convenience can always be secured with sufficient care and pains, while all the care and pains in the world will not change personal and professional qualities.

NUMBER 17 — NETTLETON & KAHN.

"The design numbered 17, like most of the others, would need to have the partitions removed from the main floor of the museum

and need to have the lecture room put up stairs, instead of on the first story, as required in the instructions. As to the library, while the arrangements for the delivery room and the book-stack could remain substantially as shown, the position of the reference rooms and service rooms would probably have to be reversed. It would hardly be worth while to contemplate so much alteration if it were not for the admirable architectural character of this design, both within and without. The disposition of the staircase and of the delivery room is extremely effective, and though the main doorway is a little small and could be made more important to advantage, the general character and effect of the building is dignified, elegant, and monumental. The exterior is one of the very best, the arrangement of the upper windows being especially agreeable.

NUMBER 50—H. C. KOCH.

"The design numbered 50 gives the museum three floors, each occupying the whole of the west wing, with hardly any partitions. In the third story is a gallery, lighted from the roof, nearly equivalent to a fourth floor, and the basement is made to count as a fifth, which is, however, only twelve feet high and not well lighted. The requirement that the museum shall be seventy feet wide is not observed, the width being cut down to sixty-three feet, which secures better light than in most of the designs which adhere strictly to the programme in this particular. But the width could, of course, be diminished in any of the others, and a fifth floor, for the museum, obtained in the basement also, if this occupation of the lower story is admissible. The arrangements for the library seem convenient, except that the librarian's room and the trustees' room had probably better change places. There are two good stairways, well placed. The most noticeable feature in this part of the design is the semi-circular book-stack. It is for the trustees to say whether this would or would not be convenient in practice. It is obviously not so susceptible of enlargement upon the ground as the oblong plan shown as an alternative. Two lecture rooms are shown, besides a recital hall, one over the other, in the middle of the front of the building. The one in the second story seems superfluous. The upper one is well placed, if not too high up, being equally accessible to the museum and the library. It is ingeniously designed, with a gallery on three sides. The stage is on the long side of the room, a disposition good for hearing, but bad for seeing the illustrations, which, in a scientific lecture room, is an essential consideration. The external appearance of the building, as shown in the elevations and perspectives, while simple and unobjectionable, does not specially commend itself for elegance. The attic story over the central doorway seems heavy.

NUMBER 51—FERRY & CLAS.

"The design marked 51 has as little to be said against it and as much in its favor as any. The arrangements for the library seem perfect, the form of the book-stack being especially ingenious and if those for the museum are less satisfactory, this is because the first story is encumbered by the lecture room. If this were removed, then all three floors of this west wing would be available for museum purposes. The second story is lighted by a central opening in the floor of the third story, a device almost essential if the required width of seventy feet is observed. A gallery could probably be added, if needed. The lecture room, which certainly ought not to be on the first floor, could be put on the second story, next the eastern staircase, occupying the whole width of the building, where are shown the patent office and the Milwaukee authors. The elevation is, to my mind, one of the best, if not the very best of them all, elegant and sufficiently dignified, and a great improvement upon the library at Leipsig, which it notably resembles. The central feature, especially, is much more to be commended.

NUMBER 53—ANDREWS, JACQUES & RANTOUL.

"The design numbered 53, while it would require perhaps more alteration than some of the others, exhibits more than almost any other of them the qualities of elegant and scholarly arrangement that should characterize a building of this class. The museum, indeed, is not only cut up into small rooms, which, of course, can easily be thrown into one, but the wing is much wider than in any of the designs. If, however, such rooms are more than sixty feet wide, they had better be open in the middle, so as to let the light from the roof penetrate to the lower floor, and if this is done, a width of eighty feet may not be too great. The staircase is opposite the entrance and the different rooms of the library elegantly arranged on the right. The reference room is ingeniously placed half a story above the main floor, and the newspaper room half a story below. But this is not essential to the design and need not be seriously considered. The only serious alteration that would be necessary, besides removing the partitions of the museum, would seem to be the change in the position of the lecture room. This could be put in the basement under the museum, or on the front of the building, in the second or third story, as might be preferred. The external aspect does not quite bear out the promise of the interior. But it is simple and dignified, and if treated with the elegance of detail that the handling of the problem seems to promise, would be suitable and satisfactory.

NUMBER 74, BORING & TILTON.

"Design Number 74 is one of those that suffer from a too faithful adherence to the requirements in respect to the lecture room. Putting it on the first floor injures the museum. The lecture room itself is one of the best, and in other respects the plan seems an excellent one. The museum itself adheres to the requirement

that it shall be seventy feet wide. This would make the middle of the building quite dark, especially in the lower stories. This design obviates this by lighting the whole middle of the building from the roof. Both the upper stories have an open well in the center. This gives three well lighted stories, besides a gallery. The external treatment is simple and monumental, and all the details give evidence of taste and refinement.

"The final choice of the committee must probably be determined in large part by consideration of expense. The best way to ascertain what any of these designs would cost to erect, is to obtain from its author such drawings and specifications as will enable an experienced builder, in the service of the committee, and in whom they have confidence, to make an estimate which he himself has confidence in. If the choice between two designs depends upon their cost, the same contractors shall make estimates upon both, under as nearly as may be the same conditions. It will be time enough to report their conclusions to the city authorities and recommend a course of action when they have thus satisfied themselves that they have found not only a desirable but a practical solution of the problem confided to them."

WHICH IS THE BUILDING LINE.

A CORRESPONDENT having submitted a case respecting the legal building line of a lot, Mr. Dankmar Adler, whose experience in matters pertaining to such questions is second to none, was asked for an opinion. It is as follows:

Editors Inland Architect:

Your note, inclosing two letters from Mr. W. G. Robinson, is at hand. In answer I submit the following:

First. If A owns a block of lots fronting on a street, and sells B a lot with the understanding that a certain building line shall be maintained by B and by all future purchasers from A, this agreement of A's will not bind future purchasers unless the condition agreed to between A and B is also made a condition in each of the various deeds issued to those who purchase from A after his transaction with B.

If, however, B can prove that one of the conditions under which A sold him the property was the establishment and maintenance of a certain building line, then, whether this proof is made by B by written document duly signed by A, or by witnesses to a verbal agreement between A and B, B will have a good claim for damages against A in case A has neglected to fulfill the terms of his agreement with B as regards building line. The extent of the damages, however, would be determined by a jury.

If B cannot prove, either by a writing of A's or by witnesses to the agreement, that the establishment and maintenance of a building line was agreed upon by A, then B has no case.

Second. As to whether the line of main wall or the line of projecting bay windows or verandas determines the building line depends very much upon the wording of the original agreement. I know of several in which this point was particularly agreed upon and clearly stipulated.

If nothing is said to determine whether the main building line or the line of projecting cornices, balconies, bay windows or verandas is meant, much will depend upon the decision upon that head of the higher courts of the state in which the property concerning which the controversy has arisen may be located; and if no decisions have been made in that state, it will be for the courts to decide which shall be the interpretation. Very truly yours,

DANKMAR ADLER.

ASSOCIATION NOTES.

DENVER ARCHITECTURAL SKETCH CLUB.

The annual election of officers for this club for 1894 took place at the last regular meeting of the old year, December 29, 1893. Apparently the members are well satisfied with their ruling powers, as the subjoined list, almost unaltered from that of 1893, will show: President, William Cowe; vice-president, Thomas A. Green; secretary, Harvey Pridham; treasurer, William E. Fisher. Directors in addition to the officers—Eugene R. Rice, Daniel R. Huntington, Harry Thomas.

It would hardly be relevant now to do more than allude to the chaotic effect which the late demonetization of silver brought upon Denver. But we, the Sketch Club, have felt it severely, not only in a financial way, but in a manner far harder to recover from, the loss of some of our brightest and most enthusiastic members. They have scattered to the four corners of the states in search of work, and I am glad and proud to record that they not only had a blessing on leaving, but have found a welcome wherever they have gone. We give a prominent place in our architectural creed to the belief that a D. A. S. C. man can earn his living anywhere.

While recording our regrets at the loss we have thus sustained, it is gratifying to mention that new members are joining, and that the annual report of our treasurer shows us to be financially

ahead; also that we have an unlimited balance of enthusiasm to draw upon for future use.

The matter of essays at informal meetings is being taken up more than ever, and the president started the new year's list with one entitled, "What the World Owes to the Arts of the Ancients." It was an excursion back into past history, handled with careful thought and artistic feeling, showing not only what those arts *had been* to the ancients, but what, if we chose, they still might be to us.

I will send the list of our subjects for competitions next month.

HARVEY PRIDHAM, Secretary.

THE ARCHITECTURAL LEAGUE OF NEW YORK.

At a meeting of the City Hall Committee of the Architectural League of New York, held January 1, 1894, the following resolutions were unanimously adopted and forwarded to the Mayor and the Advisory Committee of Architects to the municipal building commission of the city of New York:

WHEREAS, The report of the Advisory Committee to the Board of Commission on a municipal building of the city of New York has been handed in, and certain adverse criticism has appeared in the public press; and

WHEREAS, Competition drawings can under no circumstances be more than elaborate sketches, the object of a competition is fully accomplished if a plan is selected which in its general features of design, both in ground plans and elevations, conforms with the instructions given, and offers a project, which with careful study and without any radical departure from the original scheme of the design, may result in the construction of a thoroughly satisfactory building.

Resolved, That the undersigned committee of the Architectural League of New York, after carefully reading the full report, believe it to be in accordance with the terms of the instructions, and hereby reaffirm their entire confidence in the judgment of the said Advisory Committee.

GEORGE B. POST, ex officio.
CHARLES I. BERG.
JOHN DU FAIS.
G. L. HEINS.
BRUCE PRICE, Chairman.

MINNESOTA CHAPTER, A. I. A.

At the last annual meeting of the Minnesota Chapter, A. I. A., the following officers were elected to hold office for the current year:

President, Cass Gilbert; vice-president, George E. Bertrand; secretary and treasurer, Clarence H. Johnston.

The election of directors and the appointment of committees for the various branches of Chapter work has been fully perfected with a large promise of fruitful results.

The Chapter numbers thirty members on its rolls, and being well organized and energetic, it is fair to presume that the various activities in which it is engaged will make an exceedingly creditable showing when the year book is made up.

Meetings are held monthly, alternately in St. Paul and Minneapolis, at which papers are read and discussed, interesting professional data compared, and reports of committees on legislative matters, current work and draftsmen's competitions received. The draftsmen's competitions inaugurated last year have been so successful that they will be continued during the current year.

The field is ripe for harvesting much that is of benefit and value to the profession in Minnesota, and the Chapter, recognizing its opportunities, expects to accomplish correspondingly large results.

NEW PUBLICATIONS.

ELEMENTS OF SHADES AND SHADOWS FOR ARCHITECTURAL STUDENTS. By William H. Lawrence, Instructor in Architecture, Massachusetts Institute of Technology. H. G. Collins, publisher, 15 Milton place, Boston, Massachusetts, 1893.

This is a neat little octavo containing twenty-four pages of text and eight folded plates, with thirty-seven cuts. The work is divided into four chapters, embracing general principles, polyhedrons, cylinders and cones, and double-curved surfaces of revolution. The text is a model of concise and accurate demonstration, showing the skill of a practical teacher and the precision of a thorough scholar. The illustrations are admirably drawn and lettered, and the typography and paper are of the best.

As the work professes to give only the elements of the subject, the omission of many practical applications is accounted for. The only matter of special interest to architectural students as such is the last problem, which develops shadow lines on a pediment of somewhat uncertain contour architecturally.

COMPOUND RIVETED GIRDERS. By William H. Birkmire. New York: John Wiley & Sons.

This book is of the shop, "shoppy." In saying this we mean to compliment it as a book that is eminently practical, although it does not so state on the title-page. We have seen so many so-called "practical" books, at least so self-entitled, which were written by impractical men, that whenever we see the word "practical" on the title-page we are apt to take it as meaning the reverse.

The book is evidently written by one who is accustomed to execution of work and who knows the absolute necessity, in a shop, of rules which are readily applicable to the work on hand.

The first chapter is a general statement of rules. The remaining chapters give eight examples of how work should be executed and the rules for so doing. Indeed, the bulk of the book is taken up by these examples; and no better way of teaching the novice or of explaining rules to a practical man can be given than by the working out of examples.

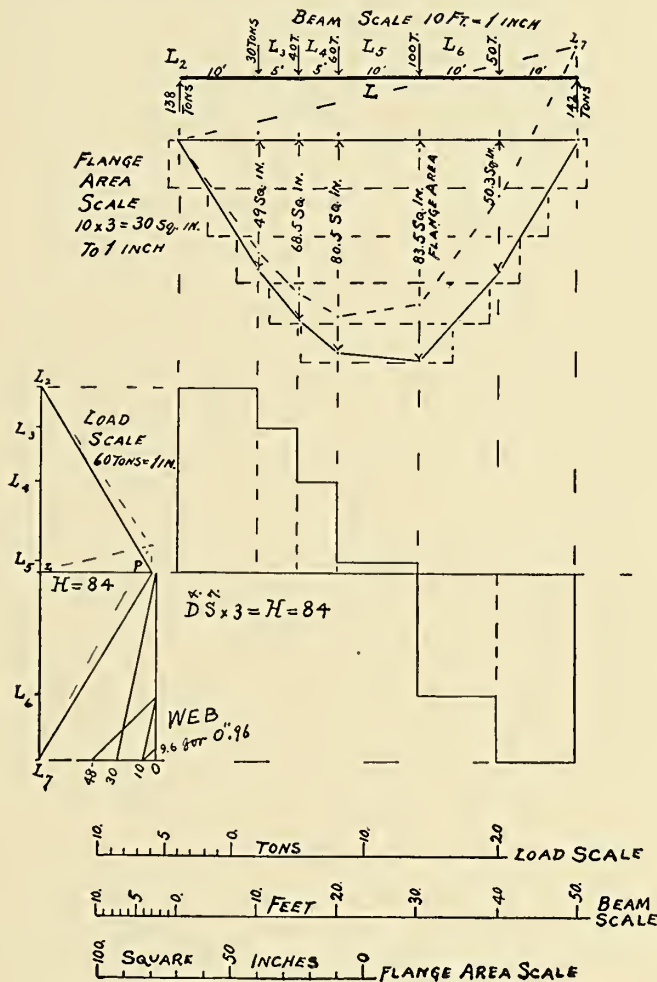
The theory of the subject is but slightly touched upon. Readers should have some knowledge of Bending Moments, etc., in order to properly understand the examples.

The graphic method is used somewhat, but not as much as it might have been. This is the more surprising as in his preface

the author speaks favorably of it. In example 8, he obtains the moments graphically, and then turns to arithmetic to find the area of a flange; whereas, if the pole distance had been taken, equal to the depth multiplied by the safe strain per square inch, the flange could have been scaled off directly by the beam scale, and saved the arithmetical operations. Since these were based on measurements by scale, the areas certainly would be as accurate in one way as the other. This is the more surprising since he has given in most of his examples three separate drawings, whereas one would have sufficed.

If the product of the depth by the strain should be either too large (or too small) for practical use, then it could have been multiplied by any assumed factor that might be necessary to bring it to a practical length; and by multiplying the beam scale by the same factor, the flange area scale would have been obtained. A little practice in such methods enables one to assume a factor such as would cause the flange area scale to be a convenient decimal scale.

We give an illustration of example 8 worked graphically.



The scales mentioned on the figures are the ones by which the figures were drawn; but, as the figures were altered in size for printing, these scales are no longer correct. The scales which are drawn at bottom of figures are, of course, correct for the figures as printed.

The loads are given in tons, yet the rules for thickness of web, and also buckling, require the tons to be brought to pounds. This is unnecessary. The rules might as easily have been given so that tons could have been used. The same is true with regard to the shearing and bearing resistances of rivets. Where loads are given in one unit, it is not desirable to be changing the unit; and this is especially true if the solution is to be obtained graphically.

The rule given for obtaining the number of rivets on each side of the girdle is sufficient; but there is no rule clearly given by which the number of rivets between any two loads can be easily obtained.

In considering the subject of stiffeners, the thickness of the (angle) iron is only considered; its shape and area appear to be neglected, and there is no rule given by which they can be obtained. Indeed, the stiffeners appear to be treated like a rectangular plate without its breadth being given. It is quite true, however, that the writer knows of no satisfactory rule for stiffeners that can be readily applied.

The book is an excellent one for office use. While it gives nothing specially new, the rules are such as can be readily applied. The practicing architect would recognize the usefulness of such a work.

There are a number of typographical errors which need correction, there is also a want of system at times perceptible, but the work as a whole is so good that such matters can well be overlooked.

A PRACTICAL TREATISE ON FOUNDATIONS: Explaining fully the principles involved, with descriptions of the most recent structures, accompanied by numerous drawings; also an accurate record of the bearing resistances of materials as determined from the loads of actual structures. By W. M. Patton, C. E., of Lexington, Virginia. New York: John Wiley & Sons, 1893.

Mr. Patton, in his preface, offers some timely suggestions pointing to the need of a work on foundations that is of a more practical nature than those that have heretofore been issued. He felt the necessity of this in his own experience as a student and teacher. He followed the latter vocation for six years and this has been succeeded by eighteen years of experience as a constructor. The book is therefore largely made up of the results of his own experience, and in giving them he has eliminated all that is possible of dry formulæ and details. But he states that of these matters he has preserved accurate records that can always be reached. He divides the whole subject into two parts: First, foundation beds, or the natural substances on which foundations must rest; and second, foundations or sub-structures, being the parts under the surface of the ground or water, as the case may be. Very little space is given to superstructures except where necessary to make the treatment of foundations more clear. He has therefore confined himself to the subject closer than is usually done in such works, and has also covered the whole field. While the largest part is of interest to the engineer there is much that addresses itself directly to architects and engineers who may be associated with them. It will be of profit to architects to read much that refers purely to engineering work, and thus, by realizing the great care that is taken in the other profession to overcome structural difficulties, they will be better prepared to meet them if encountered in their own practice. For a foundation has to do nearly the same work whether in a bridge or a building, and the principles that apply to one are applicable to the other. The chapters on concrete, building stones, quarrying, stereotomy, masonry, wind pressure, arches, brick, mortar and sand are of equal interest to the engineer and architect. Much information can be had from this book on the use of timber for foundations, and the latest experiments and opinions of experts on piling are given. The subject of borings is also carefully treated. Even the use of metallic caissons and wells has recently been introduced into architectural practice and are exhaustively treated of, not only from the writer's experience but that of other experts. A careful description in advance of the work being done is given of the proposed caisson foundation for the Manhattan Life Insurance Building in New York, which is the only matter referred to which is not an account of actual experiences.

Two interesting chapters are given on foundations for high buildings, and reference is made mainly to the experience of Chicago architects, which is very correctly summarized. This information is drawn from various reliable sources, and is not personal with the author. Among the few problems that are demonstrated in detail are comparisons between the older forms of foundation piers of concrete and stone and the later ones of rails, beams and concrete. The formulæ for constructing the latter are given in full, with illustrations. Not having personal knowledge of the "foundation beds" of Chicago, he quotes from those whom we consider to be good authorities, and makes a fair statement of points in dispute. His demonstration of a comparison between the steel and concrete foundation and the value of two different arrangements of piles covering the same surface is slightly in favor of piles. The estimate for piles is his own and is drawn from generally accepted data rather than their experimental use in the "foundation beds" of Chicago. But, as might be expected, it demonstrates practically that we may get equally safe foundations with piles, without covering so much surface, as with concrete and steel; and the question as to the advisability of using one or the other is still an open one. Altogether the account of Chicago foundations is a valuable compendium of all the information we have on the subject up to the present time. A considerable space in these chapters is devoted to matters which seem to belong in other parts of the book, and are interjected toward the end as if omitted or forgotten elsewhere. This can be corrected in future editions. Among them is a discussion of the question of frictional resistance in bridge foundations. But the subject is one in which architects are unfortunately greatly at sea. One matter of interest referred to is the fact that in estimating the weight of structures the buoyancy or flotation of a body of water or saturated earth equal to that displaced by the foundation is not always taken into consideration. This applies equally to foundations, for buildings sunk below wet or soft earth or water, and to bridge piers. It should be deducted from the actual weight. He might also have said that the unequal settlements and even the unexpected general settlements of high buildings in Chicago, on which the greatest care is supposed to have been exercised, is due to gross inaccuracies in estimating the weights of structures. We hear many statements about these unaccountable settlements, that are always charged up to "soft spots," but it would be interesting to know by whom the weights had been estimated and on what data.

The author makes these sensible remarks at the conclusion of his chapters on high buildings, which we readily indorse: "The reader will have learned, if he has even casually glanced over this volume, that engineers and architects are far from agreement as to the mode of determining the bearing power of any of the materials upon which we have to build; we are far from agreement as to the safe loads that can be put upon them or the proper manner of distributing the loads. In such cases arguments are useless; high sounding or ingenious formulæ are of but little value. Theories will not solve the problem. What we need is systematic,

honest, extensive experiments and tests, and with these, honest, impassionate interchange of ideas and deductions, without petty jealousies or fault-finding. With rigid but kindly criticism of designs and of methods of construction, we might hope to advance our knowledge, improve our practice and give the public safe, substantial and satisfactory results, at the least cost and in the least time."—P. B. W.

Volume I of the two-volume edition of the Funk & Wagnalls Standard Dictionary of the English language has been issued. The publishers say that this volume has been four years in making; two hundred and thirty-eight editors and specialists have been employed upon it; and the cash outlay has been about a half million dollars. The advance orders for the work mount up into the tens of thousands.

The following letter was received by the publishers from a well-known gentleman, prominently identified with the late World's Fair at Chicago:

"MINES AND MINING BUILDING, Jackson Park. Ill.
"Messrs. Funk & Wagnalls:
"GENTLEMEN,—I am pleased to inform you that the Standard Dictionary has been granted an award (diploma and medal) in group No. 150. The exact wording of all the awards will not be announced for probably three or four weeks."

The dictionary exhibit consisted of a number of proofsheets, as the work was only part in type—this fact makes the award more significant. The award of diploma and medal is the only class of awards granted. A gentleman who was present during the examination informs the publishers that the judges devoted nearly three hours to a critical inspection of the sheets (it was a very unusual thing to devote so much time to the examination of any exhibit), comparing the definitions with those of other dictionaries, and that they frequently expressed themselves as highly pleased and in favor of the features of the Standard. At the close of the examination, one of the judges remarked: "I have the best of other dictionaries, but this work has desirable features that others have not. I must possess a copy when it is published."

The vocabulary of the Standard is extraordinarily rich and full, that of no other dictionary nearly equaling it, although great care was taken to throw out all useless words.

The following is an actual count of words and phrases recorded under the letter A:

Stormonth Dictionary, total terms in A.....	4,692
Worcester Dictionary, total terms in A.....	6,983
Webster (International) Dictionary, total terms in A.....	8,358
Century Dictionary, total terms in A.....	15,621
The Standard Dictionary, total terms in A.....	19,736

The full number of words and terms in these dictionaries for the entire alphabet is as follows: *Stormonth*, 50,000; *Worcester*, 105,000; *Webster* (International), 125,000; *Century* (six volumes, complete), 225,000; *Standard*, 300,000.

OUR ILLUSTRATIONS.

Residence. Manly N. Cutter, architect.

A Colonial Doorway. Drawn by C. Bryant Schaefer.

Residence Entrance for Maddison Ballard. J. M. Van Osdel, architect.

House for J. G. Chapman, St. Louis, Missouri. Eames & Young, architects.

Sketch for Residence. Barnett, Haynes & Barnett, architects, St. Louis, Missouri.

Accepted Design for Milwaukee Library and Museum building. Ferry & Clas, architects.

The National Bank of the Republic. Eames & Young, architects, St. Louis, Missouri.

Premiated Design for Milwaukee Library and Museum building. H. C. Koch & Co., architects.

Block of Residences for Joseph Greusel, Detroit, Michigan. Edw. C. Van Leyen, architect.

Residence for Mrs. H. Sellick and Miss Park, Detroit, Michigan. Edw. C. Van Leyen, architect.

Exterior of Russian Court, Manufactures building, World's Columbian Exposition, Chicago. Petrovo Ropett, architect. This work was designed by one of the most distinguished of modern Russian architects, who is an expert in the vernacular style which is still practiced in the interior of that country. It is all built of wood and stained, showing the natural grain. Russia is one of the few districts that retains and practices an indigenous architecture, which this is intended to illustrate. It is remotely descended from the Byzantine and has never been influenced by the revival of Roman art which occurred in the sixteenth century. Russia was never invaded by Renaissance art until the last century. It entered by way of St. Petersburg, while the vernacular continued to be practiced in Moscow, where there are many remarkable examples in the old and new churches. The view of the Russian Court is taken from the northwest, showing the corner where Columbus avenue is intersected by a cross aisle. The arch to the right is the main entrance and is in the center of the west front. The photograph was taken a few days after the close of the Exposition, which accounts for the boxes which obscure the view.

The Castle in the German Village, Midway Plaisance, World's Columbian Exposition, Chicago. Karl Hoffaker, architect. We have elsewhere* given an account of the author of this work and

* See INLAND ARCHITECT for September, 1893.

the scheme for exhibiting a typical German village at Chicago. The whole was carried out thoroughly, successfully, and, we hope, profitably, for it was mainly instrumental in giving a respectable tone to the much abused Midway. The castle stands in the middle of the grounds covered by the village and some distance back from the main street of the Midway. The grounds are surrounded by a mimic wall, which seclude them from other attractions. Our photograph was taken after the fixtures of the concert garden had been removed. It is autumn. The trees are leafless, and we are looking across the wet ditch that surrounds the castle. To the right is the drawbridge and machicolated entrance tower, through which the main court is reached. To the right of this entrance the buildings were used for a museum of German antiquities. All the buildings to the left and the courtyard were used as a restaurant. The wall seen to the left in our picture surrounds the outer courtyard, but is roofed over to serve as a kitchen. Those parts which resemble stone walls are of framework and Germau stucco. But all the visible framing and timbering is genuine and built in the ancient manner. The roofs are covered with slate. For the sake of associating with it some bits of legendary lore it is supposed to be the castle of the knights of Von Langenau and to have been spirited across the ocean with all its contents from the fruitful pastures of Lahn and Gelbach. It is a real moated castle, such as were built with preference on those parts of the plains which could be protected by water; the well-filled moats, together with the bastions and palisades, forming a sufficient protection against hostile attacks. The building of bay work which is seen above the strong stone walls, gray with age, is decidedly the work of a more modern period, perhaps somewhere about the latter part of the sixteenth century. The original castle was destroyed by the enemy, and there was nothing to be done but to repair the injury as well as possible by erecting a story of framework, with steep roofs and turrets on the remains of the stone walls. And so a most picturesque effect has been produced, the brown-red shade of the woodwork with the white plastering of the intermediate brick filling and the gray of the stones having, under the harmonizing influence of age, melted into an artistic unity of color.

Herr Hoffaker has realized in this work all that his imagination ever depicted. He has done all that is possible with modern appliances to reproduce the actual representation of an ancient building without any scenic or theatrical accessories whatsoever. He wisely selected as his subject a castle of six hundred years or more that had been restored only three hundred years ago and kept in preservation. No detail has been neglected. Even every bit of hardware has been fashioned by hand expressly for it. We have not space to describe the painted decorations of the interior, especially those of the banqueting halls, which being in the oldest part of the castle that did not need so much renovation is all in the late Gothic style. Of this kind of work he is the acknowledged master, all the paintings being handwork and after his own designs.

Passing in at the main entrance, we turn to the right and enter the part that has been used as a museum during the Exposition. The first apartment is the great hall, or knights' hall, of the castle. It is connected at the back with the armory, and this again leads into the chapel. All these rooms have roofs of ancient timber construction. The chapel is wainscoted with paneling nine feet high, and is covered with an admirable hammer beam roof, in places richly carved. From these rooms we descend to the open court, or castleyard, where, under a shady linden tree, we behold the stone table and well-filled tankards, as if waiting for Wendelin von Langenau and his jolly band of knights, who will return no more, but whose place has been taken by Midway sight-seers and the *bon vivants* of the nineteenth century who are seeking for new excitements. After inspecting the living rooms, banqueting halls, pantries and kitchens on the left of the court, we pass out again at the front gate, step across the bridge, admire the artistically carved escutcheons which ornament the parapet of the balcony over the gate, and notice the date "1564." It was at this time that the building was restored and rescued from the ravages of centuries, and the portal newly erected by one of the knights of Langenau, who at the same time had it embellished with his armorial bearings.

Photogravure Plate: Residence for Dr. H. Genet Taylor, Camden, New Jersey. Wilson Eyre, Jr., architect, Philadelphia.

PHOTOGRAVURE PLATES.

Issued only with the Photogravure edition.

Detail of entrance residence of J. W. Farlin, Chicago. Henry Ives Cobb, architect.

Apartment building, at No. 5515 Woodlawn avenue, Chicago. Pound & Pond, architects.

Residence corner Thirty-sixth and Barring streets, Philadelphia. Wilson Eyre, Jr., architect.

Semi-detached houses for J. W. Farlin and George M. High, Chicago. Henry Ives Cobb, architect.

Residence of Dr. H. Genet Taylor, Camden, New Jersey. Wilson Eyre, Jr., architect, Philadelphia.

Merchant Tailors' building, World's Columbian Exposition, Chicago. S. S. Bemau, Chicago, architect. This beautiful structure is the only one in the park that can be put into direct comparison with Mr. Atwood's classic revivals, and therefore has been supposed, by many uninformed persons, to be from his designs. It is an accurate reproduction of the details of the Erechtheum at Athens, with the addition of a flat dome, which has everywhere been seen to be most appropriate where Greek details are employed.

It was in every way well suited to its location, and could be seen from many points of view. It was built of staff on a framework of wood.

French Asiatic Colonies building, World's Columbian Exposition, Chicago. This building is about sixty feet long and thirty feet wide, the long front to the west being seen in the illustration. It was located at the south end of the park near the anthropological exhibits, and was erected to show the products of the French colonies of Toukiu and Annam in Asia. It was designed and built in Annam by native designers and workmen, and was exhibited first at Paris in 1889. It is all of timber construction, and the interior roof construction was elaborately and artistically carved, even surpassing, in that respect, the work on the Singhalese pavilion. The exterior was treated in polychrome, which is toned down by the photograph, and the window panes were of colored glass. One of the most interesting features was the roof, which was covered with glazed tiles, the cresting of which, standing nearly four feet high, was one of the most remarkable pieces of ceramic work in the Exposition. This is in sections, about eighteen inches square and of two thicknesses so as to face both ways. In this building we find a style of architecture that is entirely new to us.

Black Forest Farmhouse, German Village, Midway Plaisance, World's Columbian Exposition, Chicago. Karl Hoffaker, architect. In illustrating the diverse styles of habitations of the German Empire in the latter part of the middle ages, the projectors of the village selected an example to show the characteristic home life of those people in whose veins German, Suabian and Franco-German blood is intermingled. It is a sample of many standing on the Gutachthale. The location in the village is such that it was not much seen by the cursory observer. It was appropriately located at the east end among trees whose foliage was so dense that we were unable to get a photograph until the leaves had fallen. Everything is there to give it a natural appearance except a mountain background. It is of timber construction on a basement of stone covered with stucco, and the roof is covered with heavy thatch, the straw for which was brought from Germany. This is a farmhouse, which, according to the custom of the country, combines with a residence all the usual requirements of a barn. The living rooms and bedrooms are on the first story below the barn floor, with its hay loft, and are accessible by a flight of steps outside, where the guard stands. On the ground floor within the stone walls are the stalls for horses and cattle. To the left, as seen, are the pig-sties. The carefully arranged beehives may be seen at the foremost corner. The building is made picturesque by many bracketed balconies, and the main roof overhangs with great boldness. If located in a hill country the barn floor would be reached from the higher ground in the rear. This, with all the other buildings of the German Village, is still intact, though the contents are removed, and they are all guarded by the faithful German sentinel who did duty through the Exposition. It is very pleasant to learn that there is a possibility that the buildings of the German Village, or most of them, may be acquired by the Park Commissioners for permanent adornments. This at least would make a valuable exhibit of the typical domestic architecture of a period of which we have few reliable illustrations.

LEGAL DECISIONS.

SUFFICIENCY OF NOTICE OF CLAIM ON MECHANIC'S LIEN.

A lien for materials furnished in the construction of a house will not be enforced when the description in the notice of claim is so defective that the premises cannot be identified by it.—*Mount Tacoma Manufacturing Company vs. Cultum*, Supreme Court of Washington, 32 Pac. Rep., 95.

WHEN MECHANIC'S LIEN IS INVALID.

Where, in an action to foreclose a mechanic's lien, the court determines that the lien is invalid, it has no authority to render a personal judgment against the one sued for the amount of the lien; and the question of jurisdiction may be raised upon appeal, though such person did not object to the court proceeding in equity, or demand a jury.—*Hildebrandt vs. Savage*, Supreme Court of Washington, 32 Pac. Rep., 109.

PRIORITY OF MECHANIC'S LIEN OVER MORTGAGE.

A mechanic's lien exists from the time the work is begun on a building, if the verified account is filed for record within four months after the demand becomes due, and is entitled to priority over a mortgage executed by the owner during the performance of the work, though the lien was not recorded when the mortgage was executed.—*Schultze vs. Alamo Ice & Brewing Company*, Court of Civil Appeals, of Texas, 21 S. W. Rep., 160.

FORECLOSURE OF MECHANIC'S LIEN.

A contractor employed an attorney to sue the owner of a building for the amount alleged to be due him under the contract, and agreed to pay him ten per cent of the recovery as a fee. The action was subsequently discontinued, and an action to foreclose a mechanic's lien was brought by the contractor, in which various other persons were sued. Several of such lienors were present or represented by counsel, when it was determined to discontinue the first action; and the contractor and his attorney testified that the attorney refused to discontinue the first action unless he could have ten per cent for collecting the money. The mere silence of

the lienors, who employed other attorneys to represent them, and who all swore positively that they made no agreement to pay the contractor anything, could not be construed into a consent for the payment of such ten per cent, and that consequently that the contractor's attorney was not entitled to a lien on the portion of the fund awarded to them.—Wright vs. Rensens, Supreme Court of New York, 21 N. Y. S., 485.

WHEN RIGHT TO MECHANIC'S LIEN IS FORFEITED.

Where a material man took a note of the owner for whom the materials were furnished, the note including the amount of such materials, and also an old book account, the note falling due more than 30 days after the last item furnished, and within which a mechanic's lien might be claimed, and being not paid at maturity, the rights of innocent purchasers intervened, and the taking of the note was a complete settlement to date, and no lien could thereafter attach for any of the accounts included therein, even though the material man continued to furnish material subsequent to the execution of the note.—Blakely vs. Moshier, Supreme Court of Michigan, 54 N. W. Rep., 54.

LIABILITY OF RAILROAD COMPANY FOR BURNING OF BUILDING BY LOCOMOTIVE.

Where, in an action to recover damages against a railroad company the complaint alleged that sparks were emitted from an engine through a defect in the spark arrester, and through the negligence of the engineer, and blown by the wind against a building, igniting and consuming it, the court will not, under the rule that a pleading susceptible of two constructions must be construed least favorably to the pleader, presume that the wind designated was an extraordinary wind, and the proximate cause of the injury, in that it is not authorized to insert words into a complaint not used by the pleader. In such an action, special interrogatories and answers thereto as to whether the company had at specified times examined the spark arrester, and whether it was in perfect condition at the time of the casualty, cannot control a general verdict in favor of the owner of the building, in that the question of the negligence of the company's employees in operating the engine is left out of consideration. Where there was evidence that at the time the accident occurred the engine threw an unusual quantity of sparks and coals of fire, and that such coals were of unusual size, the jury could rightfully infer that the fire was caused by negligence of the company. The fact that the fire originated in a partition wall by reason of one or more boards of such wall being off, is not conclusive evidence that the owner was guilty of contributory negligence, since he had a right to presume that the company would manage its engine carefully, and since there was no obligation on him to provide against unusual dangers.—C., I., St. L. & C. Ry Co. vs. Smock, Supreme Court, of Indiana, 33 N. E. Rep., 108.

"GEORGE, dear," she said one evening, "don't you think it would be a very wise scheme if we were to build a house? It's awful to have to pay out a lot of money for rent every month. Now, there's Allie, who was married a year ago. She told me that Teddy was always as cross as he could be on rent day."

"How dreadful," George murmured. "We certainly ought to build."

"We'll only need a little bit of a house, you know, with a lovely big hall—"

"And a library with a grate fire. We must have a library."

"Yes, won't that be too lovely! And then you must have a card-room and a billiard-room, and I must have a little sewing-room and a cunning little drawing-room."

"Don't forget the conservatory, dear," he suggested, "and suppose we have bay windows in every room."

"That'll be splendid," she answered, "and let's draw the plans right now."

The result, says the Chicago News Record, was that the following outline was received by an architect with a note asking that he immediately forward a perfect drawing, together with specifications.

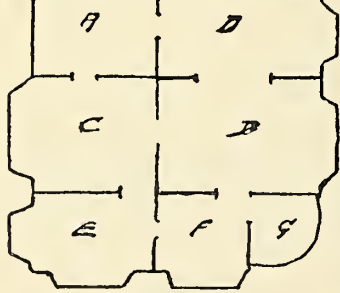


DIAGRAM OF THE HOUSE.

a. Reception-room. c. Card-room.
b. Drawing-room. f. Sewing-room.
d. Billiard-room. g. Conservatory.

When George was ushered into the presence of his prospective bride a few days after their house-planning he appeared agitated.

"George, you're certainly ill," she exclaimed.

"No, I'm not—never felt better in my life," he growled.

"Something troubles you then," she persisted.

"Well, yes. I guess you are right. A fellow don't like to know that he's the champion idiot of a town as big as Chicago. Just read that," and he unfolded a type-written letter which was as follows:

My Dear Sir: Your favor with plans for a house received. The sketch is the most unique thing we have ever had occasion to look at. We would suggest that you remodel your outline, as sometimes a dining-room, kitchen and pantries are considered necessary to a perfect dwelling. Also, will you kindly signify where the front door is to be, and would it not be wise to have one stairway? Doubtless these few things were overlooked by you.

DRAW, SKETCH & Co.

BUILDING OUTLOOK.

OFFICE OF THE INLAND ARCHITECT, }
CHICAGO, January 10, 1894.

Business of all kinds is at a very low ebb. Scarcely any preparation has, as yet, been made for the new year. Business men, big and little, are awaiting developments. The facts, as they exist, can be very briefly enumerated. Confidence is lacking; general credit has been weakened; a cautious policy has been stimulated in every channel of trade and industry; prices have declined to unheard-of limits; trade and manufacturing have been interrupted, and calculations for the future set at naught. Six months ago money disappeared from its ordinary channels so suddenly and unaccountably that business men found themselves unable to provide for current obligations. Almost as suddenly, money has returned to the vaults of bankers, and the financial statements of eastern banking centers show an unusual condition of things. The surplus reserve has reached the highest limit ever known; bank deposits are larger than they have been for years; the rate of interest has fallen to a low limit, and the banks are unable to lend idle funds on either good or indifferent security. This condition of things is surprising; it will not probably continue very long. The agencies which have brought about this unusual industrial and financial condition are not understood, and, therefore, cannot be met. The country is drifting along in shoal water, and the dangers ahead cannot be very clearly indicated. It may be safely said, however, that the greatest dangers have been passed. The large volume of money promises a revival of confidence and of industry, after certain other conditions have been adjusted, notably those of a purely legislative character. The country is wearing out its old clothes and old tools, and must shortly buy more. It is this inevitable demand which will impart the first activity which we are to enjoy. Whether that activity will be followed by increased investments in building operations, in railroad construction, railroad equipment, or in the expansion of our manufacturing capacity, and in the enlargement of our agricultural area, west and south, remains to be seen. The probabilities are that such will be the case, in a measure. The country is now in better shape than it has been for many years, for entering upon an era of prosperity. The reasons for this statement are that the cost of labor and of material has been reduced, the supply of available capital has been increased somewhat, and more and better than all, the danger of unwise expenditure, or rather of unwise commercial enterprise, has been demonstrated. In other words, the business brains of the country have learned the lesson to not do certain things, and to do certain other things. Speculation has been placed under control; high prices have disappeared; natural values have been restored and reestablished, and the legitimate in business has been made more apparent. The country needed the lesson it has received. As to the future, the only safe inference to draw is that industrial activity will necessarily expand, but gradually and on safe lines; building operations will be revived, as a consequence of a general industrial improvement, and the railroad activity will within a short time draw in its train a multitude of demands, which will give life and activity to scores of industries now suffering.

SYNOPSIS OF BUILDING NEWS.

Architects are invited to furnish for publication in this department monthly or occasional reports of their new work before the letting of contracts. Reports of buildings costing less than \$5,000 are not published.

- Chicago, Ill.—Architect J. T. Baxter: For L. H. Thomas, at 783 Warren avenue, a two-story flat building, 25 by 73 feet in size; to have a stone front, oak interior finish, marble vestibules and bathrooms, modern plumbing, electric light, etc. For Charles Comisky, corner of Fifteenth street and Turner avenue, a two-story flat building, 26 by 63 feet in size; to be of rock-faced stone front, have open plumbing, oak interior finish, mantels, marble work, furnaces, pressed brick on the sides, etc. Same architect has just sent out drawings for a five-story apartment house, 72 by 126 feet in size, to be erected at Kausas City for George W. Goldman; it will be of handsome design and have two fronts of pressed brick with terra cotta trimmings; the interior will be finished up in a first-class manner in oak, marble, tile floors, etc.; steam heating, gas ranges, electric light, elevators, etc., will be put in.
- Architects Kley & Lang: For Mrs. Ellen Durkin, at the corner of Prairie avenue between Forty-third and Forty-fourth streets, a three-story and basement flat building, 22 by 65 feet in size; to be of stone front, have sanitary plumbing, mantels, gas fixtures, heating, etc.
- Architects Hallston & Peterson: For John Erickson, on Seminary Place near Seminary avenue, a three-story and basement flat building, 22 by 54 feet in size; to be of pressed brick and stone front, have bathrooms, closets, wash-bowls, furnaces.
- Architect Julius H. Huber: For H. Mechelke, at 588 Burling street, a three-story apartment house, 25 by 70 feet in size; to have a stone front, hardwood finish, mantels, all the sanitary improvements, heating, etc. For Edward Bingle, at Southport and Belmont avenues, a two-story apartment house, 27 by 70 feet in size; to have pressed brick and stone front, bathrooms, closets, wash-bowls, mantels, electric bells, speaking tubes, furnaces, etc. For F. Links, a handsome mausoleum, 10 by 16 feet in size; to be of blue Bedford stone with bronze gates; to be erected at St. Boniface cemetery.
- Architect C. M. Almquist: Making plans for a four-story and basement apartment house, 75 by 23 feet in size; to be erected on Townsend street; to be of pressed brick front with stone trimmings, all the sanitary improvements, gas fixtures, mantels, heating, etc. For A. Johnson, Graceland avenue near Ashland avenue, a three-story flat building, 22 by 75 feet in size; to be of pressed brick and stone front, have all modern sanitary and other conveniences, mantels, etc. For William Bryar, at 2949 South Park avenue, a three-story flat building, 61 by 23 feet in size; to be of pressed brick and stone front, have all the sanitary and modern improvements, mantels, gas fixtures, laundry tubs, etc.
- Architect Robert Rae: For James T. Parish, at Fortieth street and Prairie avenue, a three-story flat building, 50 by 71 feet in size; to be of stone front, have hardwood interior finish and mantels, all fine open nickel-plated plumbing, hot-water heating, electric light, electric bells, speaking tubes, laundry tubs, driers, etc.
- Architect W. A. Furber: Made plans for a five-story store and apartment house, 93 by 60 feet in size; to be pressed brick and stone front, have hardwood interior finish and mantels, all the modern sanitary improvements, steam heating, electric light, etc.; to be erected at Twenty-sixth court, for E. F. Pulsifer.
- Architects Ruehl & Gatterdam: For P. Farley, on Hermitage avenue, a three-story and basement flat building, 22 by 67 feet in size; to have a pressed brick and stone front, gas fixtures, bathrooms, closets, laundry tubs, mantels, etc. For Edward Landsberger, on the corner of Forty-first street and Wilcox avenue, a two-story flat building, 22 by 50 feet in size; to be of pressed brick and stone front, have all the sanitary improvements, gas fixtures, mantels, electric bells, speaking tubes, laundry tubs, etc. For Herman Paesler, on

Douglas Park boulevard and Central Park avenue, five three-story flat buildings, 22 by 70 feet each; to have pressed brick and stone fronts, hardwood interior finish and mantels, all the modern and sanitary conveniences, steam heating, etc. Also made plans for a three-story flat building, 50 by 62 feet in size; to be erected on California avenue opposite Douglas Park; it will have a stone front, hardwood interior finish and mantels, the best of sanitary arrangements, gas fixtures, laundry tubs, electric bells and speaking tubes; cost about \$15,000.

Architect R. G. Pentecost: For Mrs. L. Engle, a four-story store and apartment building, 25 by 86 feet in size; to be erected at 4232 Cottage Grove avenue; the front will be of pressed brick with stone trimmings, the interior to have hardwood finish, mantels, gas fixtures, all fine open plumbing, iron store fronts, freight elevator, laundry tubs, etc.

Architect J. C. Brompton: For Louis Zulck, at Hollywood, a two-story and basement residence, 24 by 40 feet in size; to be of frame with stone basement, have hardwood finish and mantels, gas fixtures, furnace, laundry tubs, etc.

Architect Frederick W. Perkins: Made plans for a four-story store and flat building, to be erected at the corner of Halsted street and Eyanston avenue, for Dr. E. E. Gwynne; it will have fronts of pressed brick, with stone trimmings, all the modern sanitary conveniences, gas fixtures, mantels, heating, etc.

Architect W. T. Leshar: For Jacob Brown, on Loomis street, west of Edgemont avenue, a three-story and basement apartment house, 50 by 42 feet in size; to have a handsomely designed front of stone and pressed brick; the interior to have hardwood trimmings, mantels, gas fixtures, the best of sanitary plumbing, etc.

For J. M. Tanner, on Chestnut street east of State, a four-story and basement apartment house, 46 by 70 feet in size; to be of stone first story, and the balance of pressed brick and stone; the interior to have hardwood finish and mantels, laundry tubs and driers, all the sanitary conveniences, bells, speaking tubes, freight elevator, etc.

Architect A. F. Hussander: Has just commenced work on the six-story and basement warehouse, 50 by 158 feet in size; to be erected at State street near Sixteenth, for Martin Dawson; it will be of pressed brick front with stone trimmings, mill construction, have elevators, probably steam heating, etc.

Architects Newman & Demoney: For C. F. Gardner, on the corner of Madison avenue and Seventy-third street, a three-story apartment house, 50 by 70 feet in size; to be of pressed brick and stone front, have the best of modern plumbing, electric light, mantels, bells, tubes, etc.

Architect Niels Buck: Made plans for a two-story flat building, 22 by 44 feet in size; to be erected on Commercial avenue near Lincoln avenue; it will have a front of pressed brick with stone trimmings, partly hardwood trimmings, mantels, gas fixtures, sanitary plumbing, etc. Also made plans for three two-story flat buildings; to be erected on Paulina street near Cornelia, for J. B. Durand; to have fronts of pressed brick and stone, plumbing, mantels, etc. Also will begin work very shortly on a two-story flat building; to be of stone and pressed brick front, have plumbing, mantels, etc.; to be erected at Paulina street near Cornelia. Also made plans for a three-story flat building, 23 by 70 feet in size; to be erected at Rice street north of Chicago avenue, for M. Petersen; it will have a front of pressed brick, with stone trimmings, mantels, gas fixtures, the sanitary plumbing, etc.

Architect L. E. Stanhope: For Mrs. E. F. Leach, at Sixty-second street and Wharton avenue, a two-story and attic residence; to be of frame construction, have hardwood finish, mantels, gas fixtures, etc.

Architects Ostling Brothers: For John B. Johnson, two three-story and basement flat buildings; to be erected on Newport avenue near Clark street; they will be 23 by 56 feet in size each; have stone fronts, hardwood interior finish, mantels, all the latest sanitary improvements, gas fixtures, etc. For O. Vider, at Garfield avenue near Sedgwick street, a four-story and basement flat building, 48 by 70 feet in size; to be of stone for the first story, and the balance to be of pressed brick and terra cotta; all the modern sanitary conveniences, mantels, gas fixtures, bells, tubes, etc., will be put in.

Architects Boehm & Zimmermann: For M. Kotz, at 1159 North Clark street, a two-story flat building, 25 by 60 feet in size; to be of stone front, have all modern plumbing, mantels, furnaces, etc. For J. Floeter, at Unter Den Linden, a three-story flat building, 21 by 47 feet in size; to be of pressed brick and stone front, have plumbing, mantels, etc.

Architect Frederick Foehtinger: For Michael Mead, a four-story and basement apartment house, 20 by 87 feet in size; to be erected on Superior street near State street; it will have a Bedford stone front, hardwood finish and mantels, speaking tubes, electric bells, gas fixtures, etc. For John H. Mayer, at 479 North Clark street, a four-story double store; new front of pressed brick and stone, new plumbing, gas fixtures, etc.

Architect J. P. Larkins: For J. P. Schlund, at South Chicago, a two-story basement and attic residence, 22 by 50 feet in size; to have a neatly designed front of stone and pressed brick; will put in all the modern sanitary conveniences, mantels, furnace, gas fixtures, etc.

Architects Crowen & Richards: For Theodor Nelson, at Forty-sixth street and Forestville avenue, a two-story and basement residence, 25 by 65 feet in size; to be of pressed brick, stone and terra cotta front, with slate roof; the interior will be handsomely finished in polished and carved white oak for the front stairway, reception hall and principal rooms; also mosaic floor; hot-water heating, electric light, the best of open sanitary plumbing, and specially designed mantels and sideboards will be put in.

Architect George Grussing: For C. Gardner, on Fulton street near Kedzie avenue, a two-story and basement flat building, 25 by 57 feet in size; to have a front of rockfaced and cut stone, hardwood interior finish and mantels, gas fixtures, etc. Also, making plans for two three-story and basement flat buildings, 38 by 60 feet in size each; to be erected on Adams street and Spaulding avenue; to have handsome fronts of stone and pressed brick, interior in hardwood finish, and mantels, and all the modern sanitary improvements.

Architect E. R. Krause: For L. D. Kneeland, two three-story and basement apartment buildings, 75 by 63 feet in size each; to be erected at West Pullman; to have fronts of pressed brick, stone and terra cotta; the interior to be finished in Georgia pine, have the modern sanitary conveniences, mantels, etc.

Architects Turnbull & Postle: For J. Flood, on Calumet avenue near Forty-ninth street, a three-story and basement flat building, 38 by 84 feet in size; to have a front of pressed brick and stone, hardwood interior finish and mantels, the best of plumbing, etc. Also, made plans for remodeling the Hotel Champlain, on Sixty-sixth street and Champlain avenue, into a modern apartment house; will put in all the modern sanitary improvements, gas fixtures, steam heating, etc.

Architects Adler & Sullivan: For J. L. Ball & Co., a four-story and basement warehouse, 50 by 107 feet in size; to be of pressed brick and stone front; to be erected on the northeast corner of Taylor street and Fifth avenue.

Architect S. V. Shipman: For J. H. Andrews, at 389 Wabash avenue, a five-story and basement warehouse, 25 by 160 feet in size; to have a front of pressed brick and stone.

Architect Robert S. Smith: For B. W. McDevitt, on Wentworth avenue and Sixty-eighth street, a three-story flat building, 50 by 65 feet in size; to have a front of stone and pressed brick on the side. For Albert J. Maher, on Sixtieth street and Madison avenue, a four-story and basement apartment house, 50 by 65 feet in size; to have a pressed brick and stone front, hardwood interior finish and mantels, the modern sanitary plumbing, etc.

Architect Theodor Lewandowski: For Louis Wille, on York place near Clark street, a two-story and basement double flat building; to have a stone front, the sanitary plumbing, gas fixtures, mantels, furnaces, bells, speaking tubes, etc.

Architect W. R. Gibb: For William Hancock, on Jackson boulevard near Rockwell street, a three-story and basement flat building, 50 by 64 feet in size; to have first story of stone and the balance of stone and pressed brick; cost about \$16,000.

Architects Raeder, Coffin & Crocker: Making plans for the Menoken Club, to be erected at 1196 to 98 Washington boulevard; it will be two stories and basement, 48 by 100 feet in size; the front will be of Roman mottled yellow brick, with stone trimmings and flat roof; the style of architecture is the Italian Renaissance, and shows a very handsome building; in the basement will be the bowling alley, lunchroom, kitchen, toilet rooms, janitor's living rooms,

storage and boiler rooms; on the first floor will be the reception hall, reading-room, billiard hall and coatroom; the second story will contain library, ladies' parlor and toilet rooms, cardrooms and ballroom; the interior will be elaborately finished, and be well supplied with the modern plumbing, heating, lighting, etc.

Architect Frederick Meyer: For Ed E. Roehle, at 3751 Lake avenue, a three-story and basement apartment house, 24 by 60 feet in size; to have a front of pressed brick and stone, all the modern sanitary improvements, mantels, sideboards, gas fixtures, heating, etc.

Architect W. S. Smith: For H. Bjorncrants, on Norwood avenue, Edgewater, a two-story basement and attic residence, 34 by 40 feet in size; to be of pressed brick and stone front, have pine finish, mantels, the sanitary plumbing, gas fixtures, furnace, etc. For Charles Lutz, at Park Ridge, a two-story residence, 33 by 46 feet in size; to be of frame construction with stone basement, have sanitary conveniences, mantels, gas fixtures, furnace, etc.

Architect C. M. Palmer: For A. M. Ross, on Barry avenue near the Lake Shore drive, a three-story and cellar residence, 28 by 72 feet in size; to have a handsome rockfaced Bedford stone front, hardwood interior finish, mantels, the best of sanitary improvements electric and gas fixtures, steam heating, etc. Also a two-story brick stable to match, size, 28 by 38.

Architects Jenney & Mundie: For A. J. Monaghan, at Aldine street, Lake View, a three-story and basement apartment house, 100 by 73 feet in size; to have a cut stone front, hardwood finish, all the improvements, steam heating, etc. For E. D. Winslow, at Buena Park, a two-story basement and attic residence; to be of pressed brick and stone front, have hardwood interior finish, hot-water heating, etc.

Architect Perley Hale: For Joseph Beifield, at 3732 to 3740 Cottage Grove, avenue, two fine two-story store and apartment buildings, 42 by 70 feet each, and in the rear of these two four-story apartment buildings; the fronts to be of pressed brick with stone trimmings; have all the modern plumbing and conveniences, steam heating, electric light, etc.

Architects W. A. Youmans & Bro.: For John Johnson, at 6126 Carpenter street, a two-story flat building, 22 by 50 feet in size; to be of pressed brick and stone front, have cypress finish, mantels, gas fixtures, all the sanitary improvements, heating, etc.

Architect Henry Sieks: For Henry G. Emmel, at 500 Wells street, a one-story addition and a rear addition of four stories; will put in steam heating, plumbing, gas fixtures, etc.

Architects Huehl & Schmid: For James Piggott, on Seminary avenue and Newport, a three-story flat building, 50 by 50 feet in size; to have a front of pressed brick and stone; the first story to be of stone, also stone bay windows; will put in hardwood interior finish and mantels, gas fixtures and all improvements.

Architect E. R. Krause: For B. L. Roos, at Lincoln avenue and Wells street, a four-story and basement store and flat building; to be of pressed brick, stone and terra cotta front, have all the modern sanitary plumbing, hardwood finish, and mantels and steam heating.

Architect C. F. Herman: For C. M. Merker, at 261 Seminary avenue, a two-story and basement flat building, 30 by 60 feet in size; to be of stone front, have sanitary plumbing, hardwood finish, mantels, gas fixtures, furnaces, etc.

Detroit, Mich.—Architects A. C. Varney & Co.: For V. P. Bayley, a block of three-story residences on High street; size 100 by 75 feet; brick and stone, all modern improvements; to cost \$20,000. Also a four-story flat building; size 100 by 70 feet; brick and stone, to be built on the boulevard; cost \$40,000.

Architects Malcombson & Higginbotham: For the Detroit Museum of Art, a three-story, fireproof extension; size 80 by 84 feet; cost \$30,000.

Architect Gordon W. Lloyd: For Edson Moore & Co., a five-story wholesale house, iron front, stone and brick to replace store recently destroyed by fire.

Architect Ed C. Van Leyen: For Mrs. H. Sellick, a two-and-a-half-story, pressed brick and stone; size 36 by 60 feet; to cost \$6,500. For John M. Avery, a two-and-a-half-story double brick residence; slate roof, modern improvements; size 35 by 65 feet; cost \$7,500. For B. H. Edwards, a two-and-a-half-story frame residence; to cost \$7,500.

Architect William S. Joy: For C. W. O'Brien, a two-story modern brick and stone residence; 39 by 53 feet; cost \$9,000.

Architect P. L. Chapoton is preparing plans for block of stores and residence flats, to be erected on Michigan and Fifteenth streets; size 63 by 78 feet; at a cost of \$8,500.

Estimated amount of building in Detroit:

1893.	
January.....	\$218,300
February.....	230,400
March.....	618,900
April.....	793,300
May.....	421,600
June.....	490,600
July.....	484,900
August.....	260,300
September.....	190,300
October.....	331,900
November.....	182,300
December.....	164,000
Total.....	\$4,386,800
Total, 1892.....	5,727,300

Milwaukee, Wis.—The Northwestern Mutual Life Insurance Company are having plans prepared for a six-story office building, to be erected on East Water and Chicago streets.

Architects Van Ryan & Lesser: For E. E. Warner, a three-story block of flats, brick and stone; to cost \$2,000.

Minneapolis, Minn.—During 1893, 2,837 building permits were issued for buildings estimated to cost \$4,301,750; the amount for which permits were issued in 1892 was \$4,729,615.

Montreal, Canada.—Architects Perrault and Mesward: For the Laval University, a five-story university building, to be built of stone and brick, at a cost of \$140,000.

Architect Felix Labelle: For the Canadian Pacific Railway Company, new depot and hotel, to be four stories; size, 300 by 66 feet, of stone and brick; to cost \$350,000.

Pittsburgh, Pa.—Architects Riddle and Keiru have prepared plans for a three-story brick building, to be built on Penn avenue; cost, \$12,000.

Architect Charles Bickel: For J. L. Mitchell, two two-story stone and frame residences; cost \$32,000.

St. Louis, Mo.—Architects Matthews & Clark: For Edward A. Bayrd, a two-story store and flat building; 40 by 60 feet in size; to be of brick and stone, and cost \$8,000.

Architect J. D. Paulus: For Charles Burgdorf, a two-story store and flat building; 57 by 64 feet in size; to be of brick and stone, and cost \$9,000. Also, for R. Mueller, a two-story stone store and flat block; 48 by 64 feet in size; to cost \$6,000.

Architect G. Becker: For Charles Hilmer, a three-story residence; 25 by 51 feet in size; to be of brick and stone, and cost \$6,000.

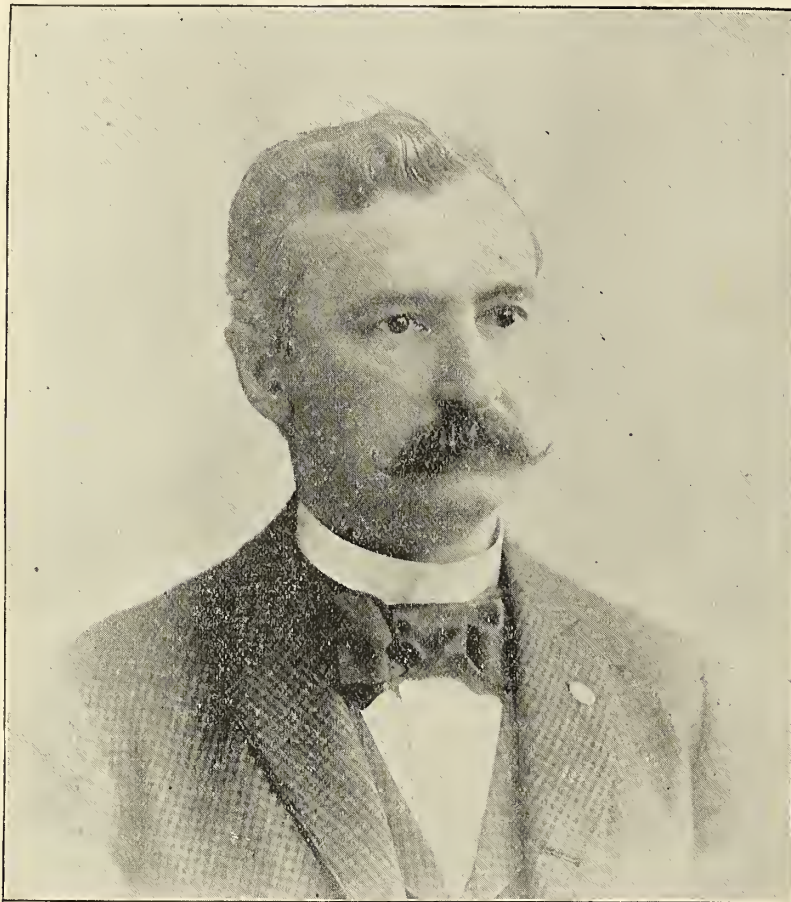
St. Paul, Minn.—Architects Reed and Stem are drawing plans for a residence for Thomas B. Scott on Summit avenue between Virginia and Fanington avenues, to cost \$35,000; it will be of granite with gray stone trimmings, and will have all modern conveniences; the house will be two and one-half stories high, 40 by 65 feet on the ground.

Architect J. Walter Stevens is perfecting plans and will soon let the contract for a four-story mercantile building, to be erected for Joseph McKey, on Sixth street near Robert; it will be fifty by 100 feet, brownstone and pressed brick, steam heat, electric light, hardwood finish on first story, tiled and hardwood floors; to cost \$25,000.

The aggregate amount of building permits issued in 1893 was \$1,636,218, which is fully twenty per cent below the cost of the buildings, as the fee system is used. Plumbing permits were issued during the year for \$30,897 worth of work. Less building was done in 1893 than in any year since 1886.

FRANKLIN H. HERR.

The subject of this sketch, Mr. Franklin H. Herr, was born at Longford Hall, Holmesburg, Philadelphia county, Pennsylvania, April 19, 1847, and is a descendant



of one of the fine old German families of Pennsylvania, some six thousand of whom are now living in that state. Mr. Herr entered the union army as a member of the 34th New York Light Field Battery, or Romer's Battery. At the close of the war he was honorably discharged, and is now a member of Columbia Post 706, of Chicago. For valuable secret service during the war, Mr. Herr was presented by Major-General Hancock with an elaborate gold medal, of which he is justly proud. He was a prisoner of war at Andersonville and Libby prisons, and carved his name on the window-cap of Libby prison, where it can be seen today, as also on a plate on the floor, showing the spot assigned to him to sleep. He has attained the highest possible position in the prominent secret order to which he belongs, having been twice chosen commander of his commandery, and deputy supreme commander of Illinois and west to the Mississippi.

Franklin H. Herr is a striking illustration of what self-reliance, ability, integrity, perseverance and, in common parlance, "hustling" will do in this age and city in carving out a destiny and raising one to a position of honor and influence. He is in all respects a self-made man, and occupies his present position solely by virtue of his own unaided effort. He has keen business sense, is a great stickler for making all contracts in writing, and makes it a point to have them carried out to the letter. His untiring energy for the past year has resulted in perfecting the brick of the American Stone Press Brick Manufacturing Company, of which company he is a director and general manager. These brick are a departure in building material which are destined to surprise the building world. Mr. Samuel G. Artingstall, city engineer, in conversation with Messrs. Herr and Dunphy, said that he had been looking for this for years and that it was the best brick he had ever seen.

The advantages claimed by the process of manufacture owned and used by the American Stone Press Brick Manufacturing Company are these:

No special kind or quality of sand is required in the manufacture; for equally

additional expense they can be made equal to choice Philadelphia brick, which sell from \$35 to \$40 per thousand. Indorsed by the following experts:

John M. Dunphy, ex-Commissioner of Buildings and ex-Treasurer of Chicago.

Samuel G. Artingstall, City Engineer of Chicago.

D. H. Burnham, architect, Director of Works of the World's Fair, Rookery building, Chicago.

W. W. Boyington, architect, 159 La Salle street, Chicago.

Thomas C. Gondie, architect, formerly with Adler & Sullivan.

W. E. Mortimer, formerly of Mortimer & Tapper.

C. C. Miller, architect.

John W. Hersey, general contractor and builder, 843 Adams street, Chicago.

George Messersmith, general contractor and builder.

Erick J. Ostling, of Ostling Brothers, Room 88, 159 La Salle street, Chicago.

Curtis & McDonald, architects, 112-114 Dearborn street, Chicago.

Rights will be for sale in every state of the Union outside of Illinois. States will be divided and sold in halves, and counties will be sold. Few shares of stock in parent company for sale.

For information, address F. H. Herr, general manager, or John M. Dunphy, superintendent, Room 11, 149 La Salle street, Chicago.

George B. Foster, president; M. D. Coffeen, secretary; Herrmann Goettinger, treasurer; F. H. Herr, general manager; John M. Dunphy, superintendent.

AMERICAN STONE PRESS BRICK MANUFACTURING COMPANY,

Room 11 Major block, 149 La Salle street, Chicago.

An examination of the brick shows a close fiber, a cohesiveness which is found in few of the burned bricks, and as tests of fire, water and freezing show they are unaffected by climatic changes. Their non-absorption of moisture is strongly in their favor, and it is hoped that in them is found the solution of the efflorescence problem.

good brick can be made from any ordinary sand bank. The brick require no burning and can be laid in the wall within three days after leaving the press. This saves not only the time and cost of burning, but avoids warping and variations in size, color and hardness, which are inseparable from all burned brick. Every brick is as perfect as the mold can make them, and becomes as hard as stone. This, again, saves all grading, and makes every brick equally available for use. They can be molded to any form, size or color required, and made with any press having sufficient pressure. No disintegration or disfiguration takes place when exposed to the weather. No evaporation or white substance appears on the surface. They can be made to withstand a pressure of 12,000 pounds to the square inch, and severer tests than any burned brick made. They will stand any test required of any brick in the world. They can be sold at a price not to exceed about \$16 to \$20 per thousand, equal to the average St. Louis or Philadelphia brick which sell for \$25 to \$27 per thousand. With a very slight





INLAND ARCHITECT PRESS.

RESIDENCE, DR. H. GENET TAYLOR, CAMDEN, NEW JERSEY.

WILSON EYRE, JR., ARCHITECT, PHILADELPHIA.

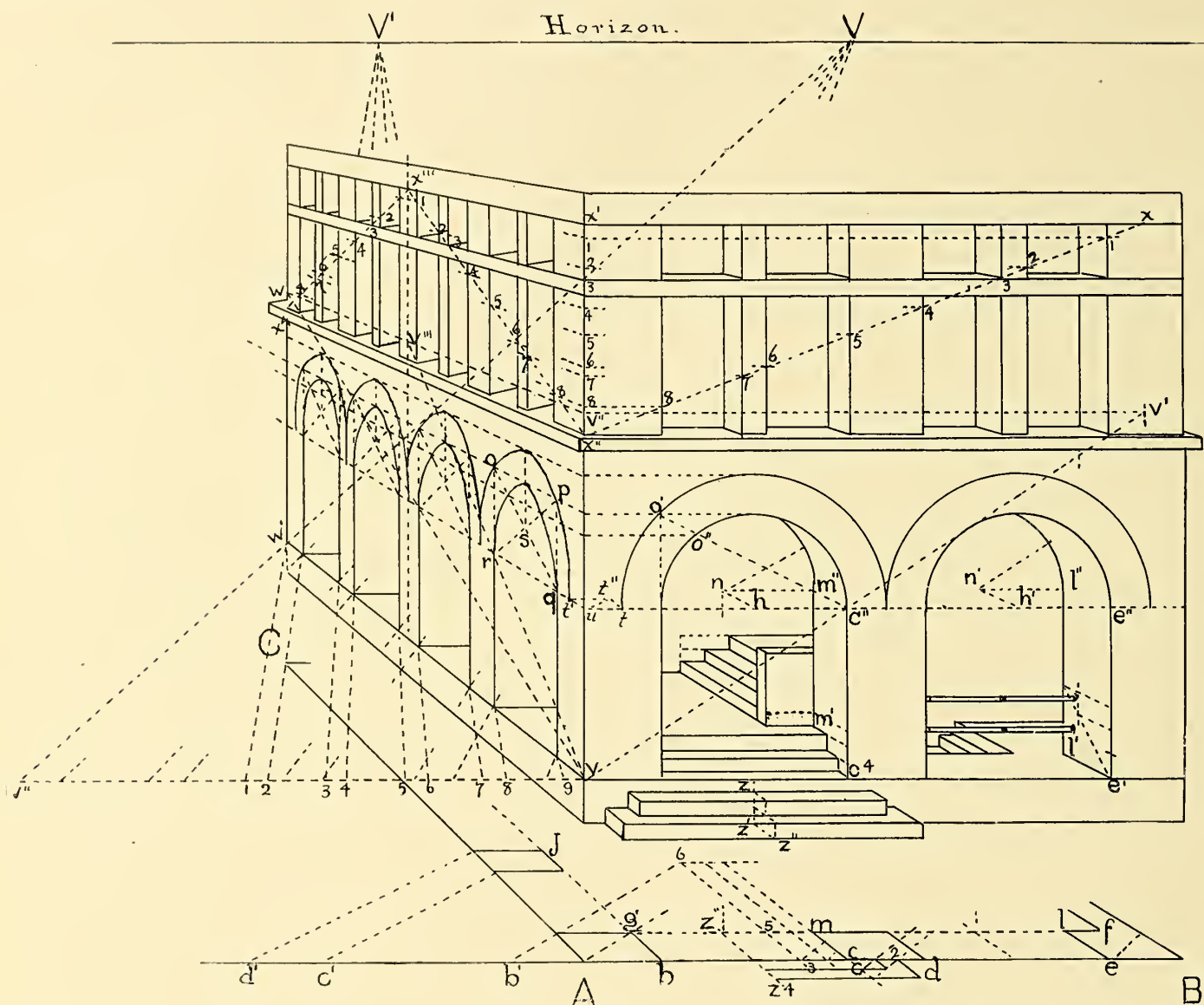


FIG. 123.

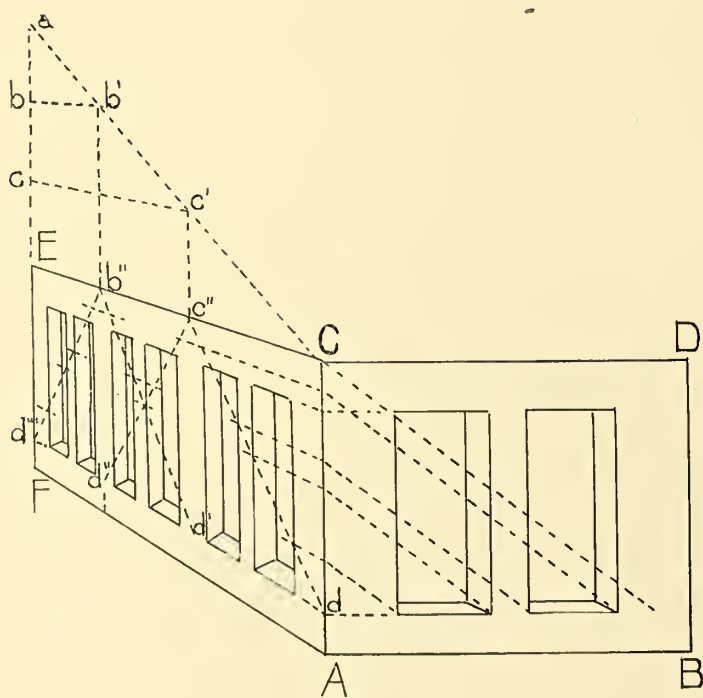


FIG. 128.

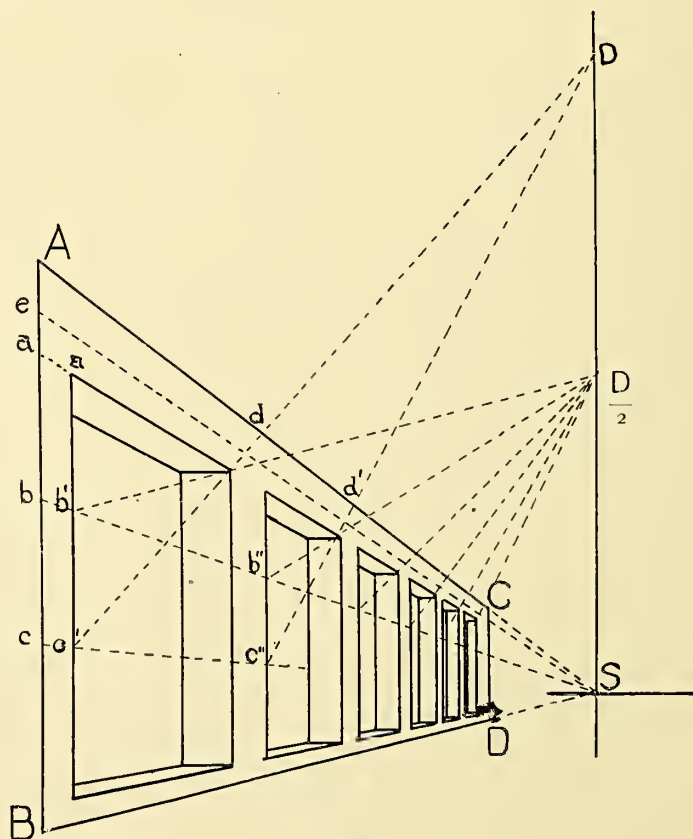
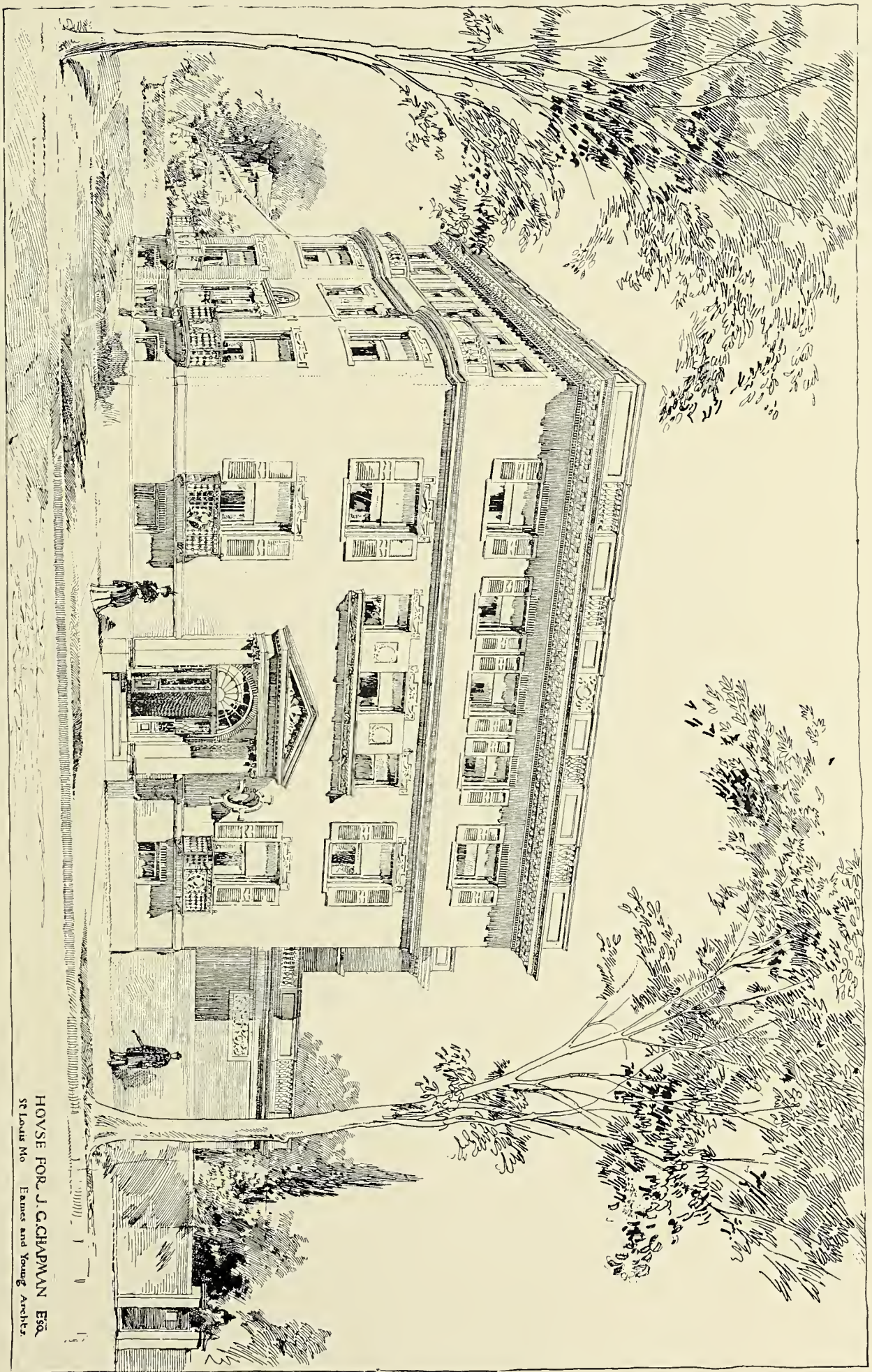


FIG. 132.





HOUSE FOR J. C. CHAPMAN ESQ.
St Louis Mo James and Young Architects

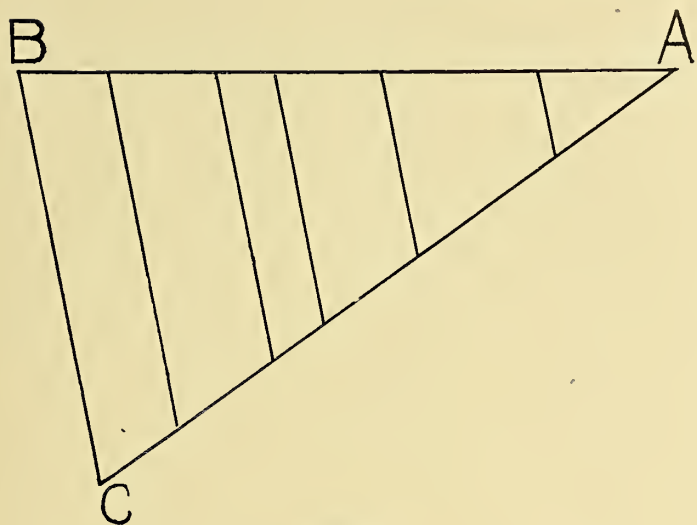


FIG. 125.

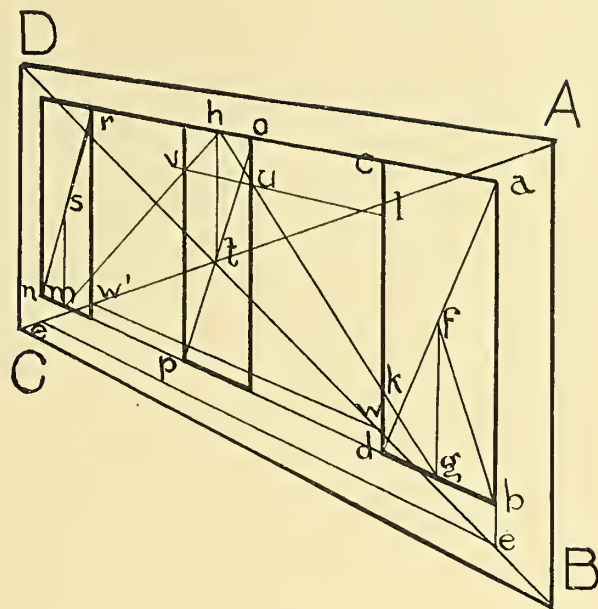


FIG. 129.

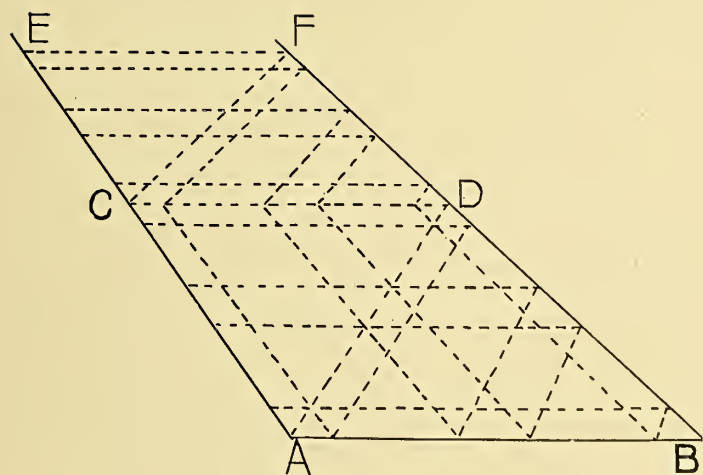


FIG. 126.

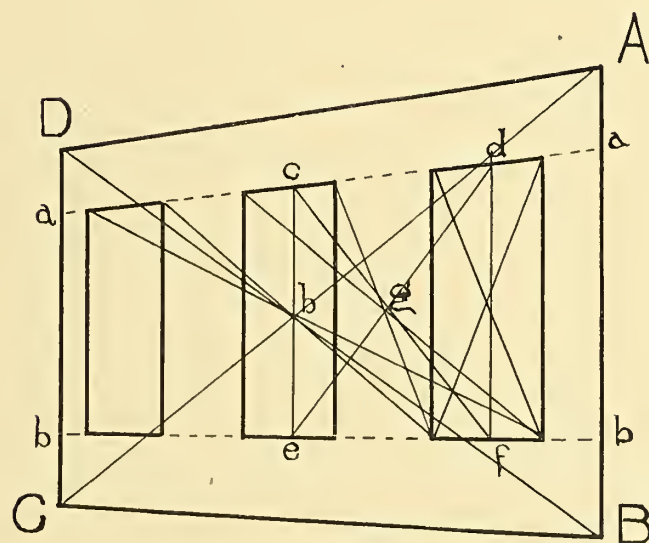


FIG. 130.

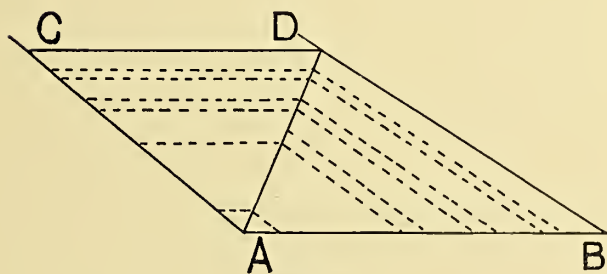


FIG. 127.

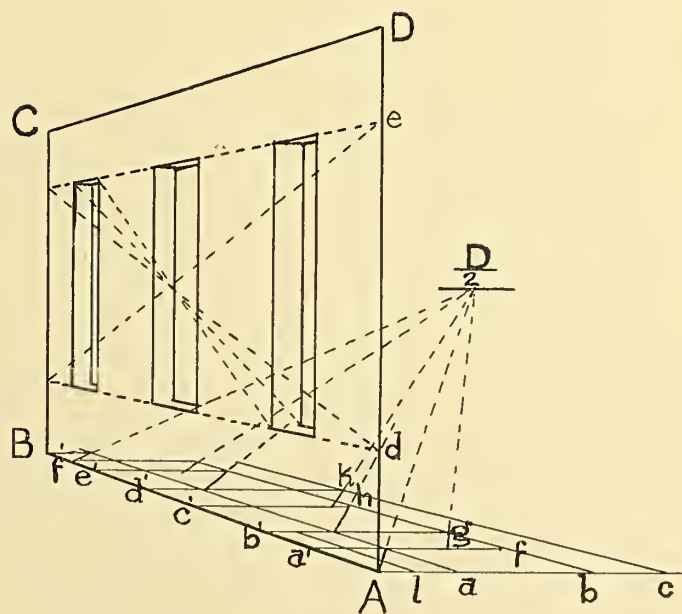


FIG. 133.

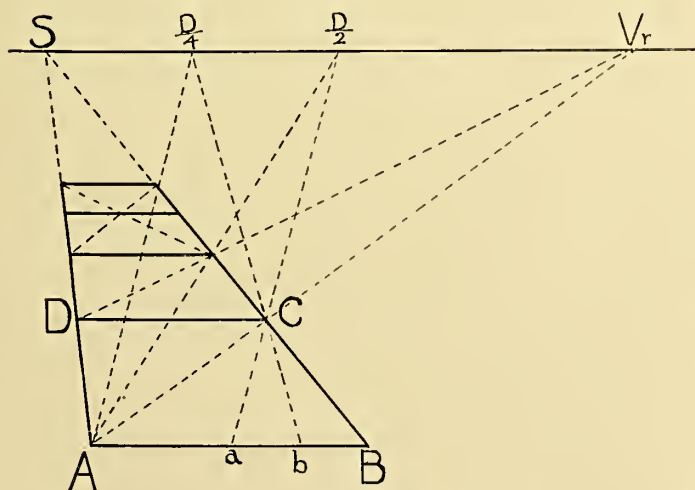
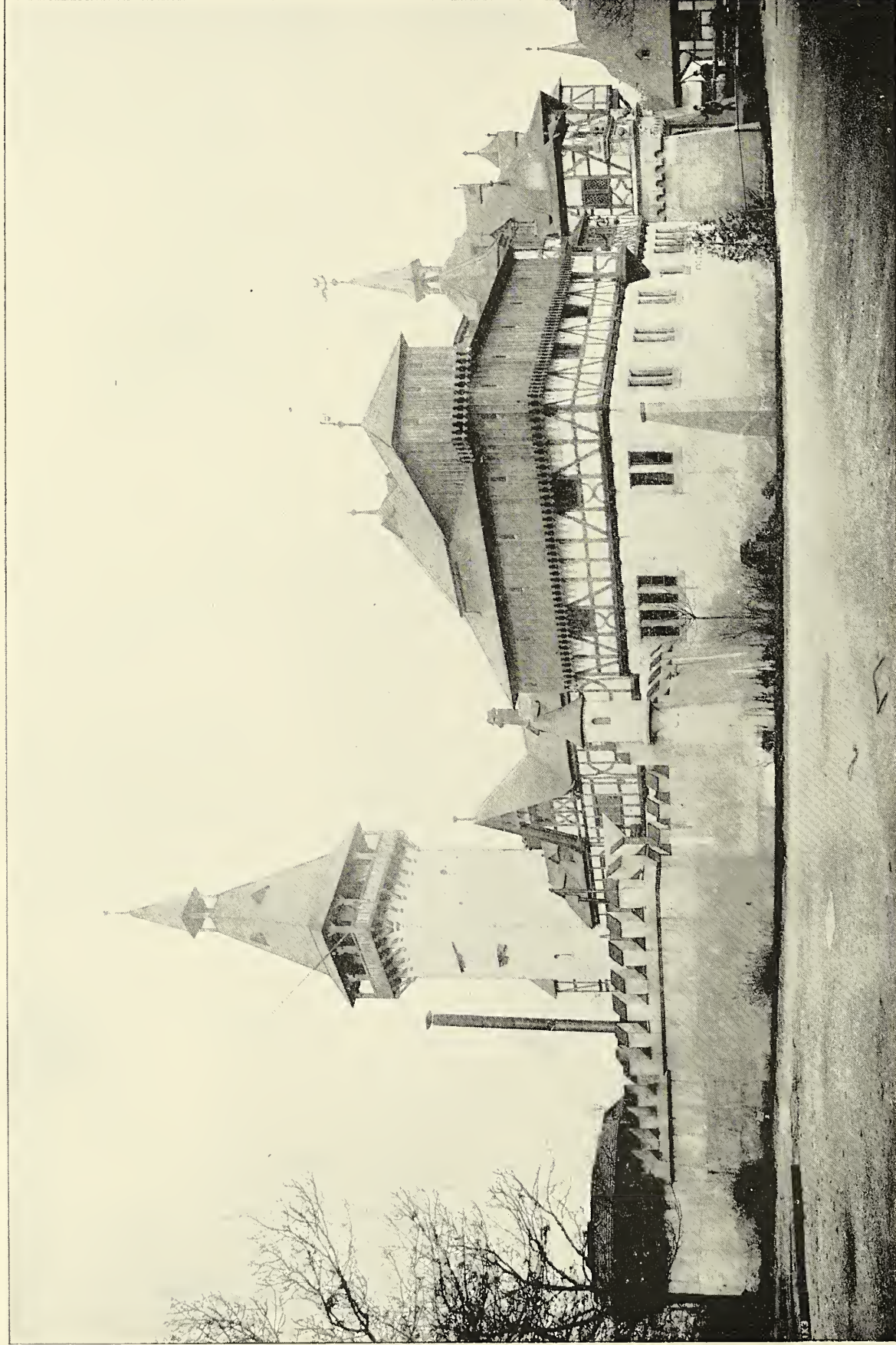
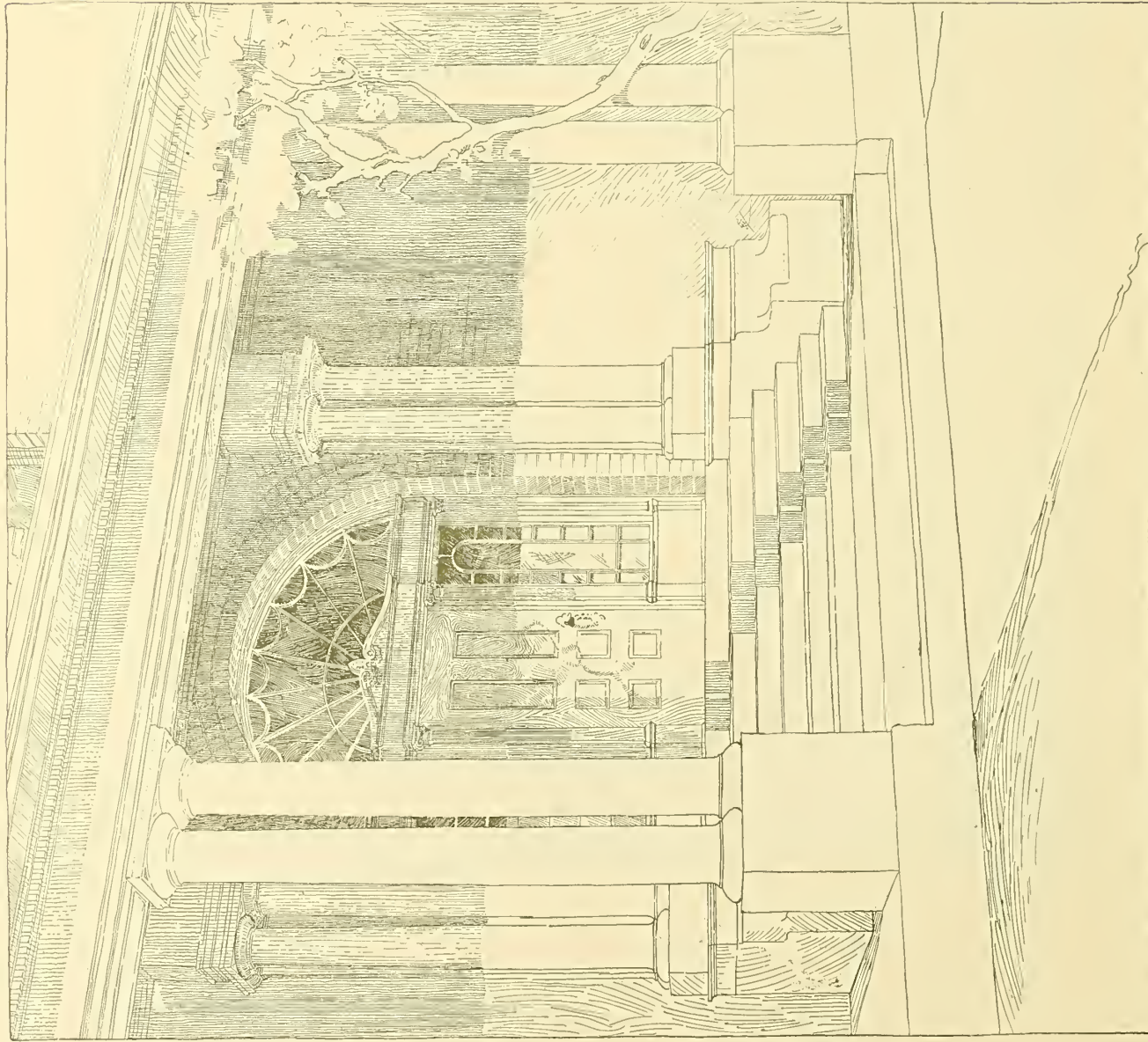


FIG. 131.

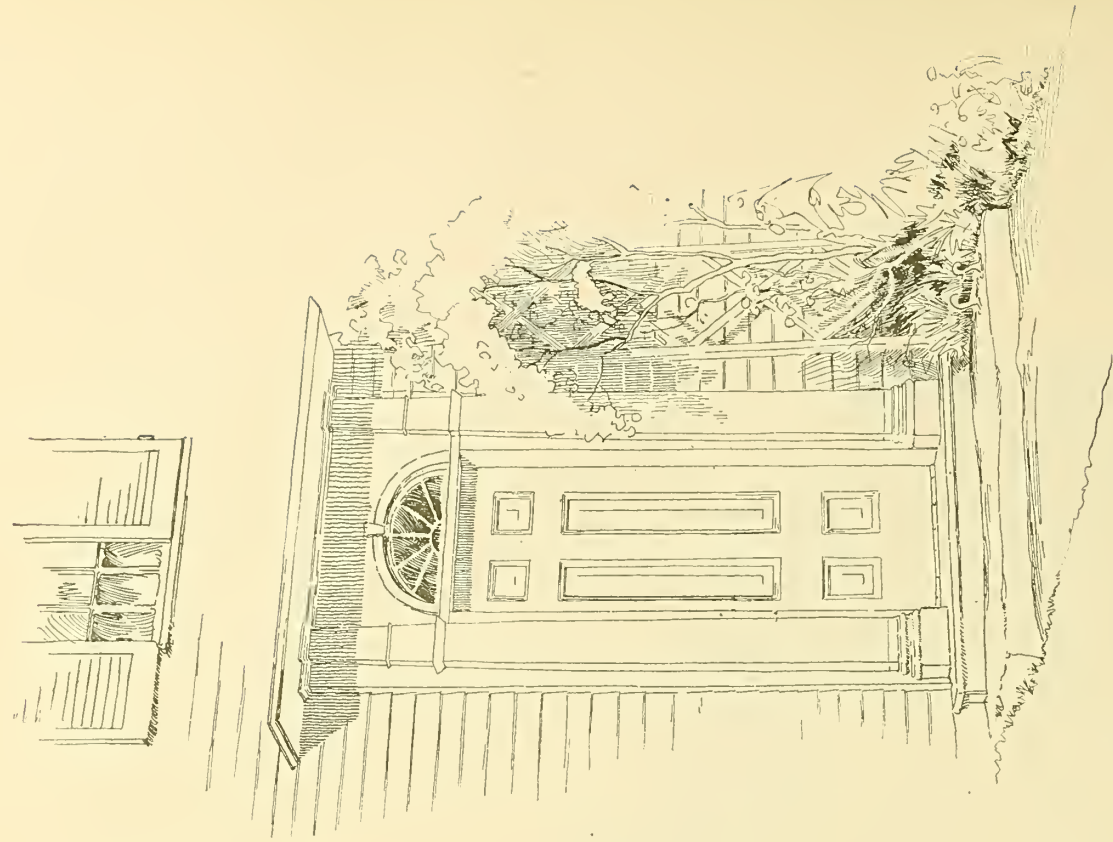


THE CASTLE FROM THE SOUTHWEST, GERMAN VILLAGE, MIDWAY PLAISANCE, WORLD'S COLUMBIAN EXPOSITION, CHICAGO.

KARL HOFFAKER, ARCHITECT.



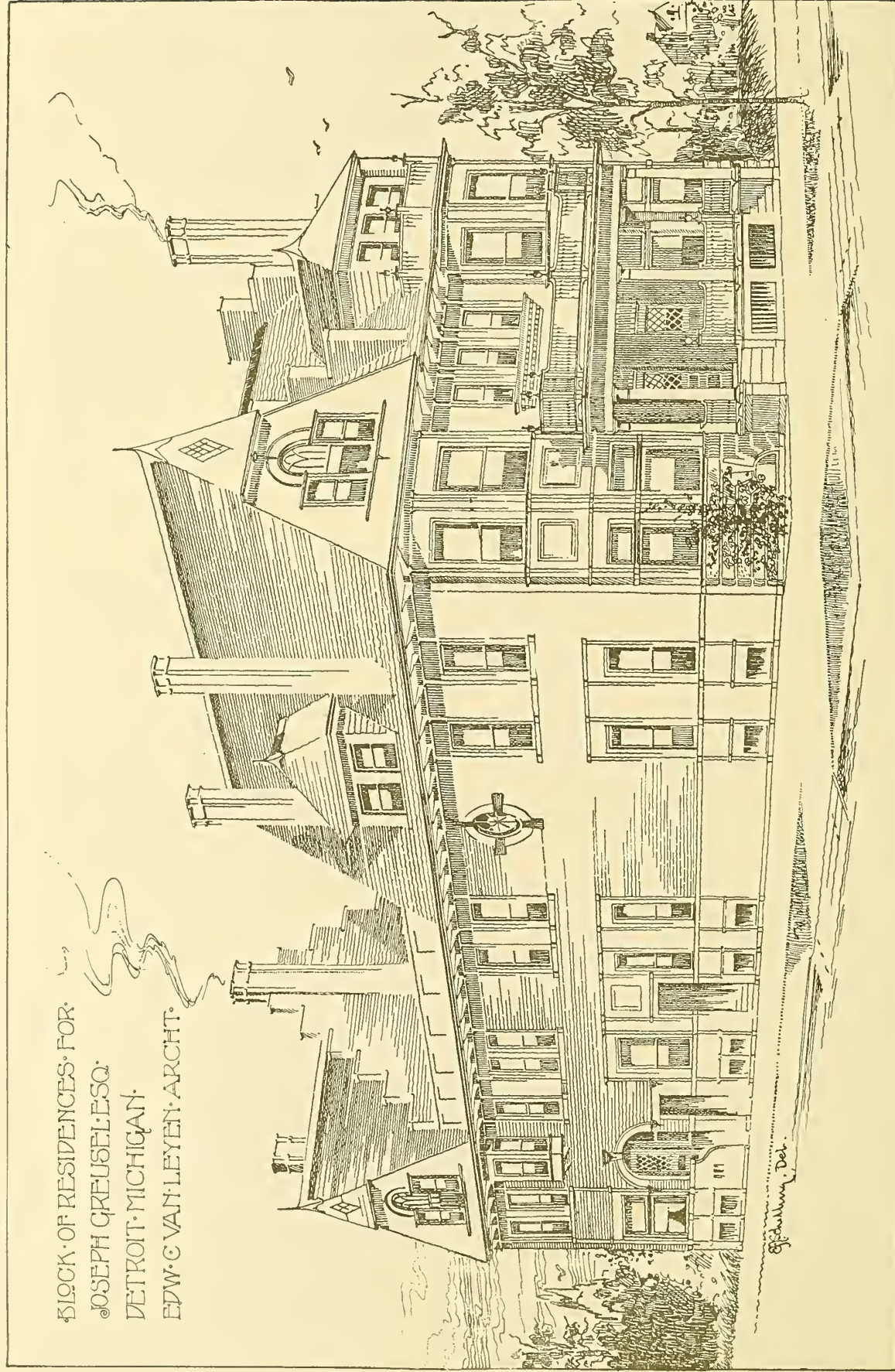
RESIDENCE ENTRANCE (FOR BRADDISON BALLARD) - JOHN M. VAN OSDEL, ARCHITECT.

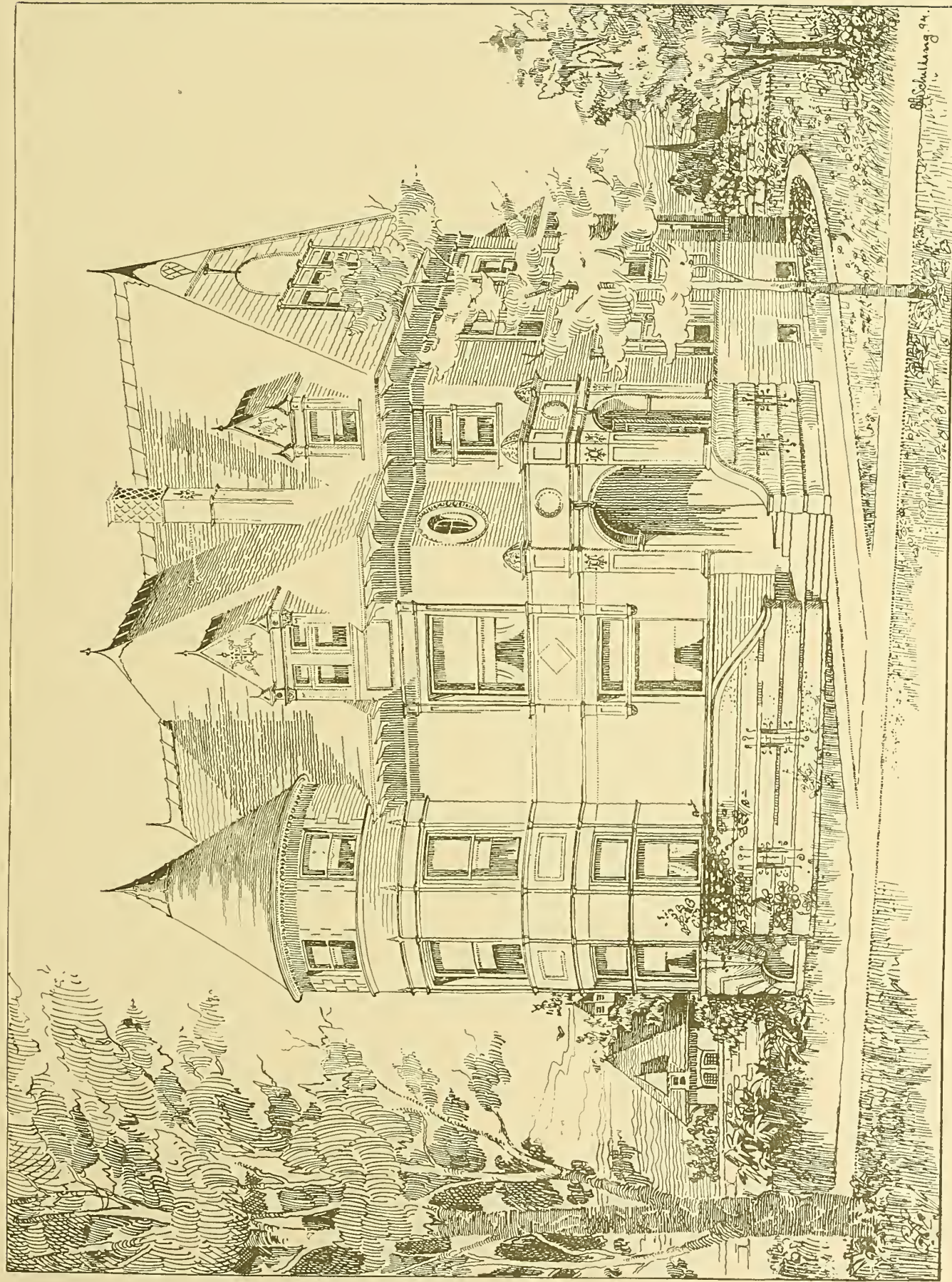


A COLONIAL DOORWAY

NEAR MILFORD - MASSACHUSETTS.

DRAWN BY C. BRYANT SCHAEFER. 9-92

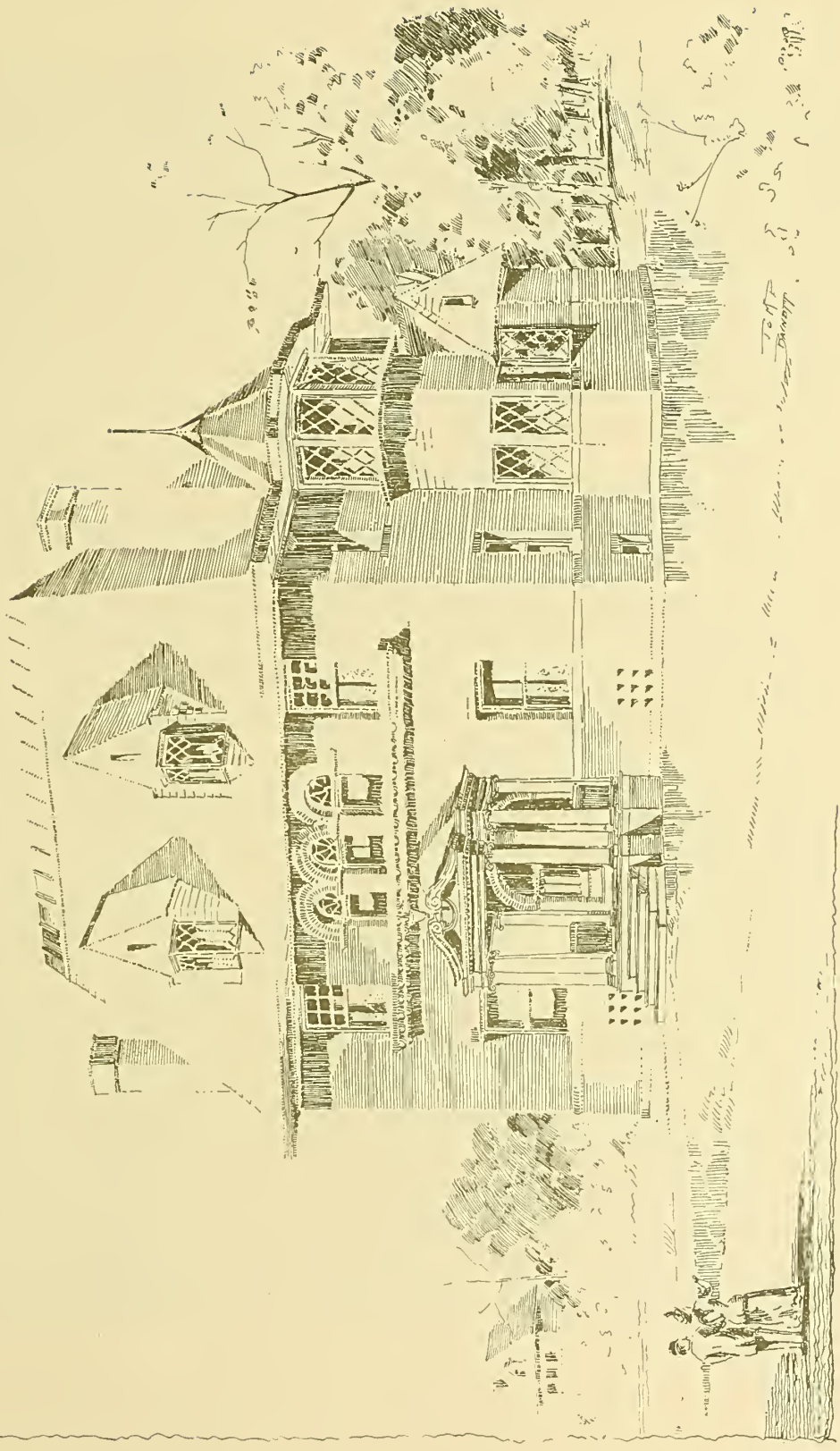


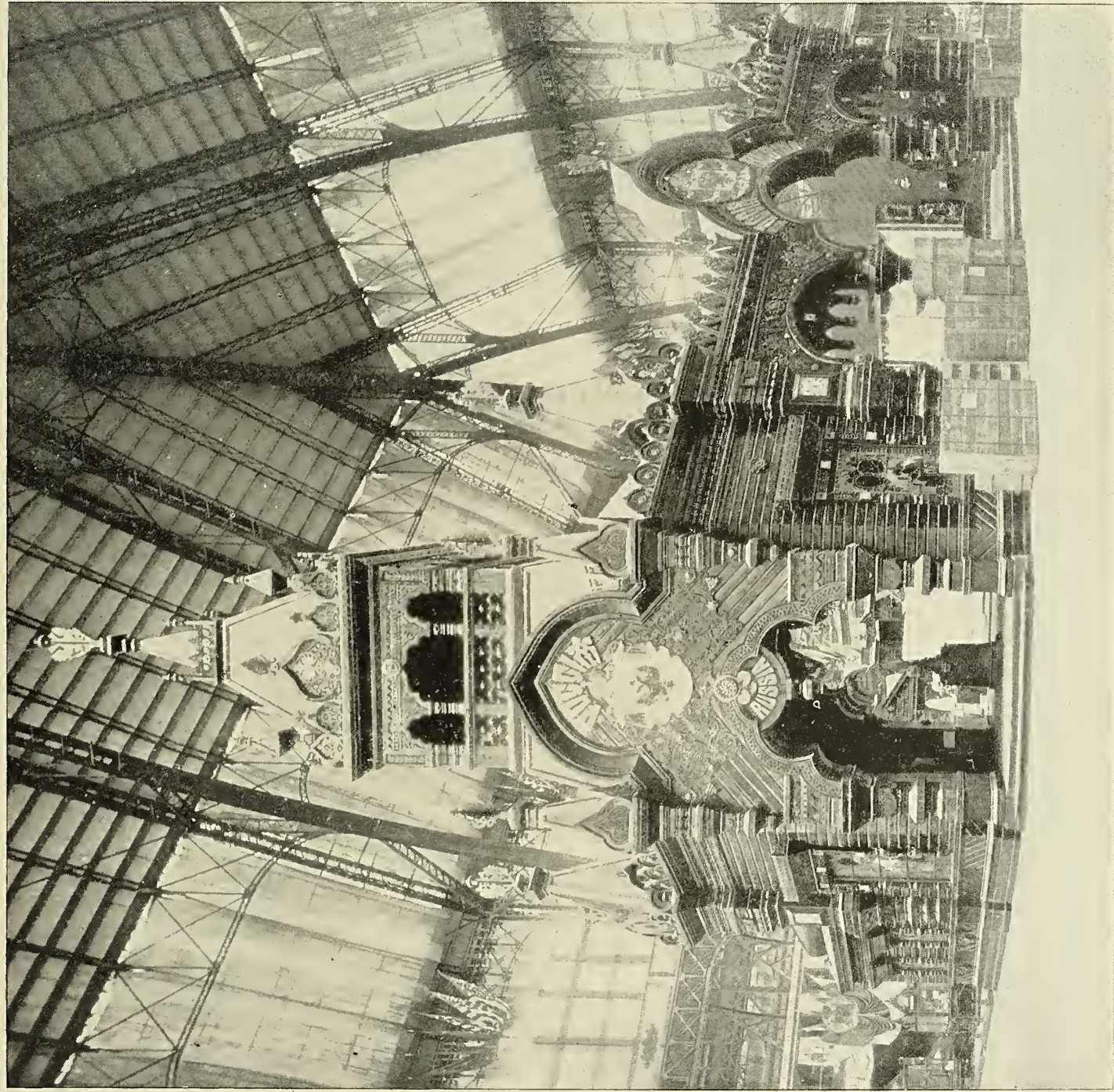


RESIDENCE FOR MRS. H. SELICK AND MISS PARKER, DETROIT, MICH.

EDW. C. VAN LEYEN, ARCHITECT.

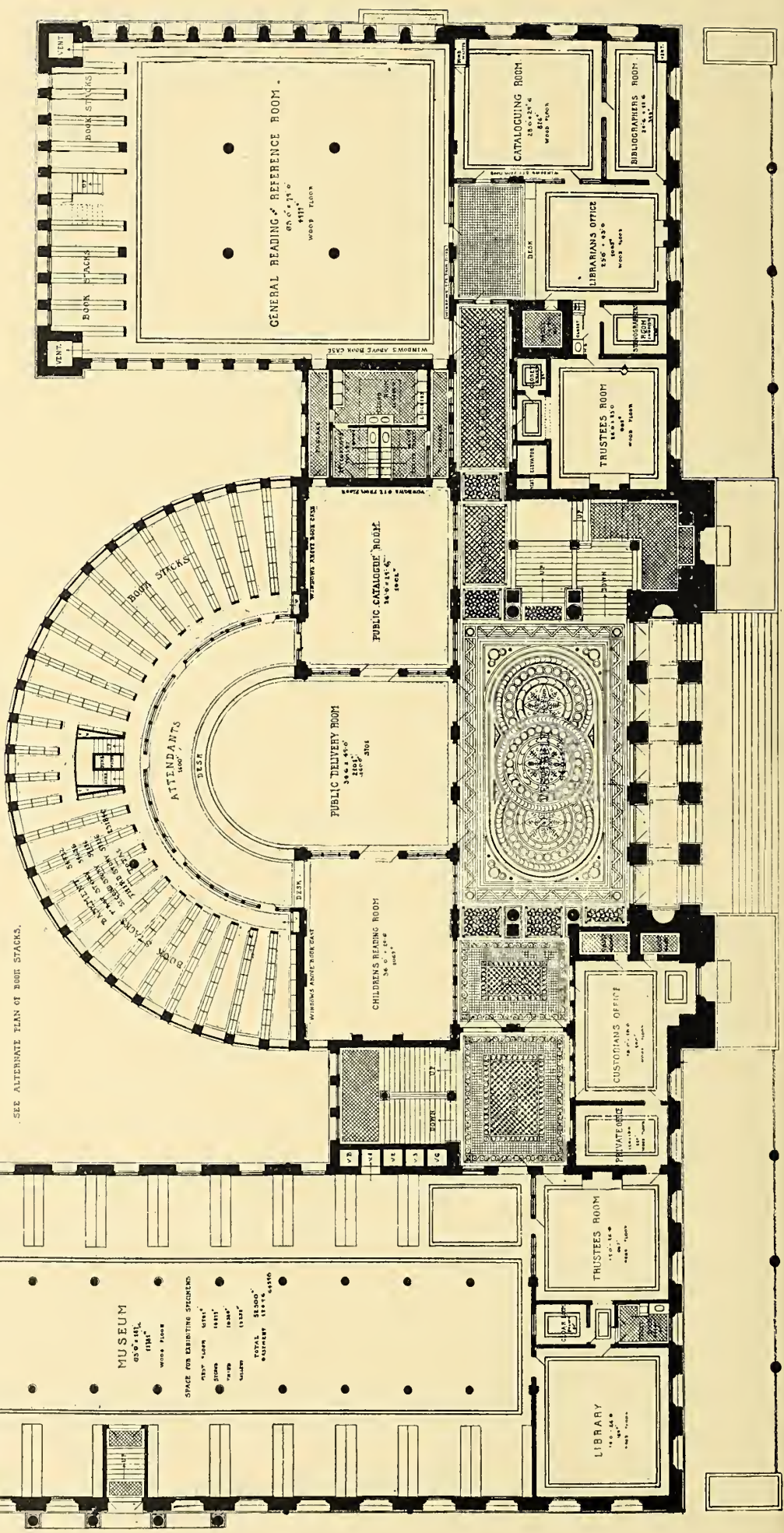
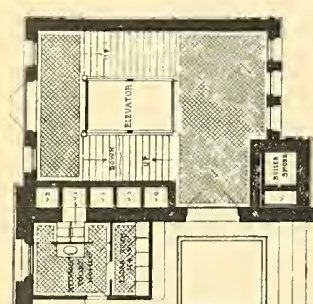
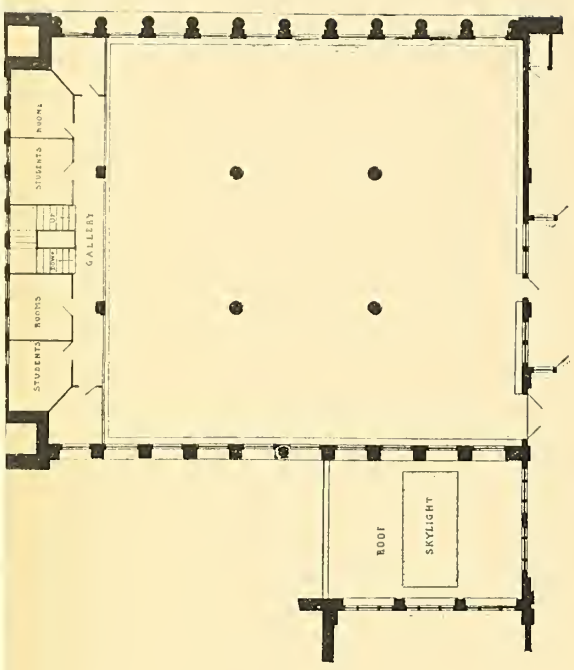
SKETCH FOR RESIDENCE
DARLITT HAYNIS AND
DARLITT ARCHT.



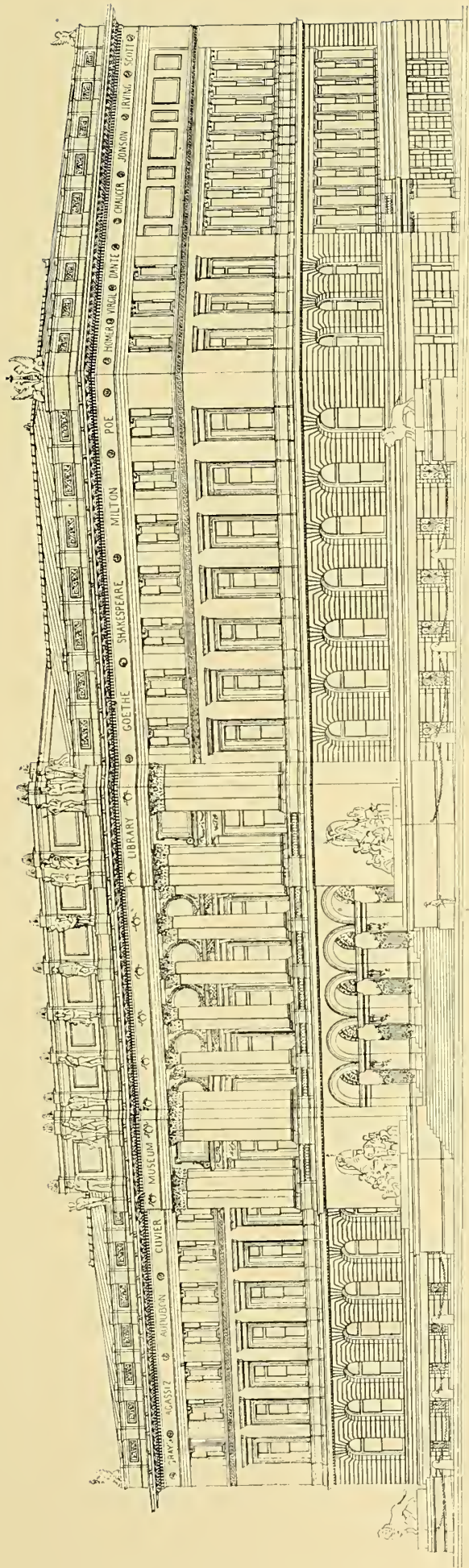


EXTERIOR OF RUSSIAN COURT, MANUFACTURES BUILDING, WORLD'S COLUMBIAN
EXPOSITION, CHICAGO.

PETROVO ROPETT, ARCHITECT.

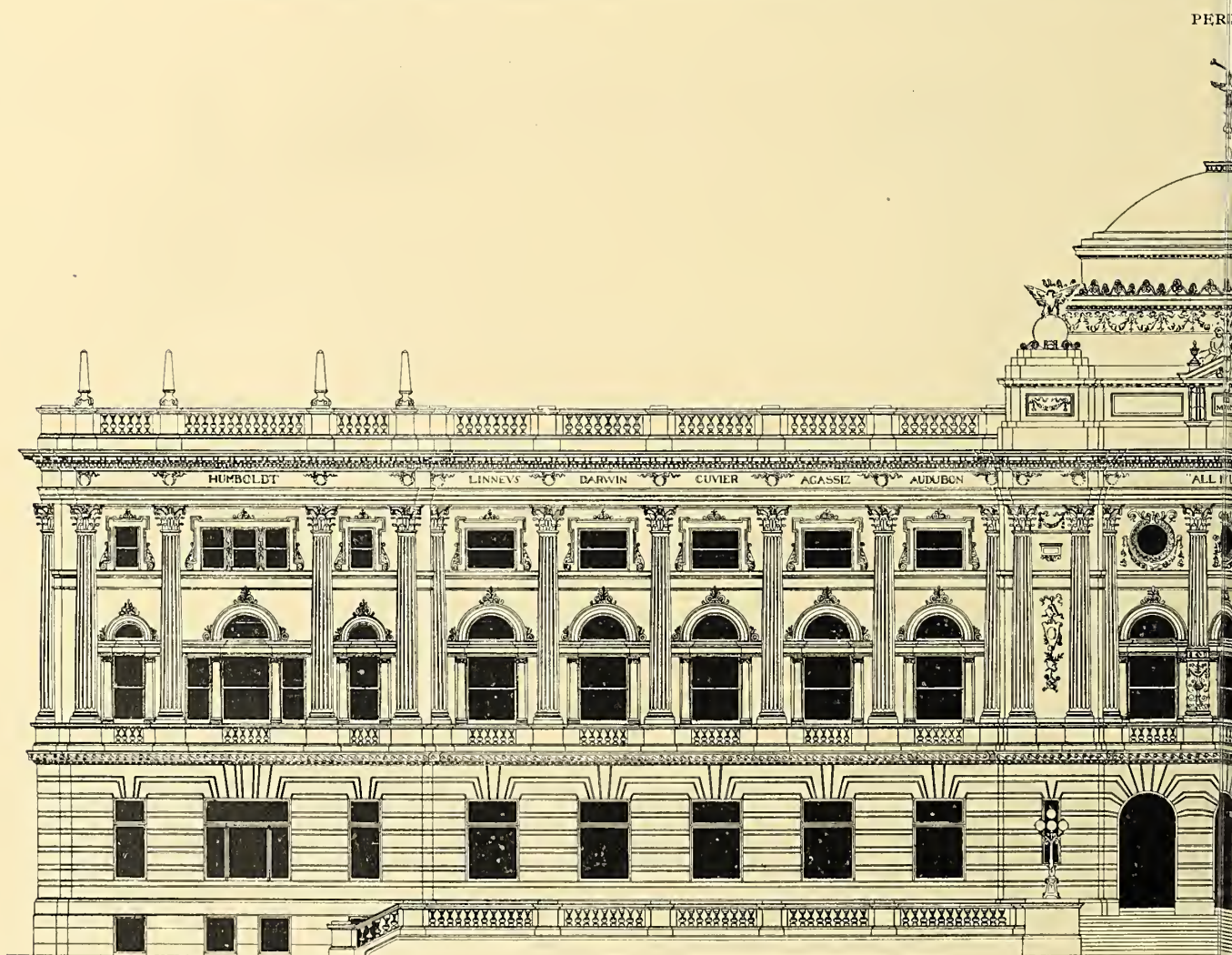
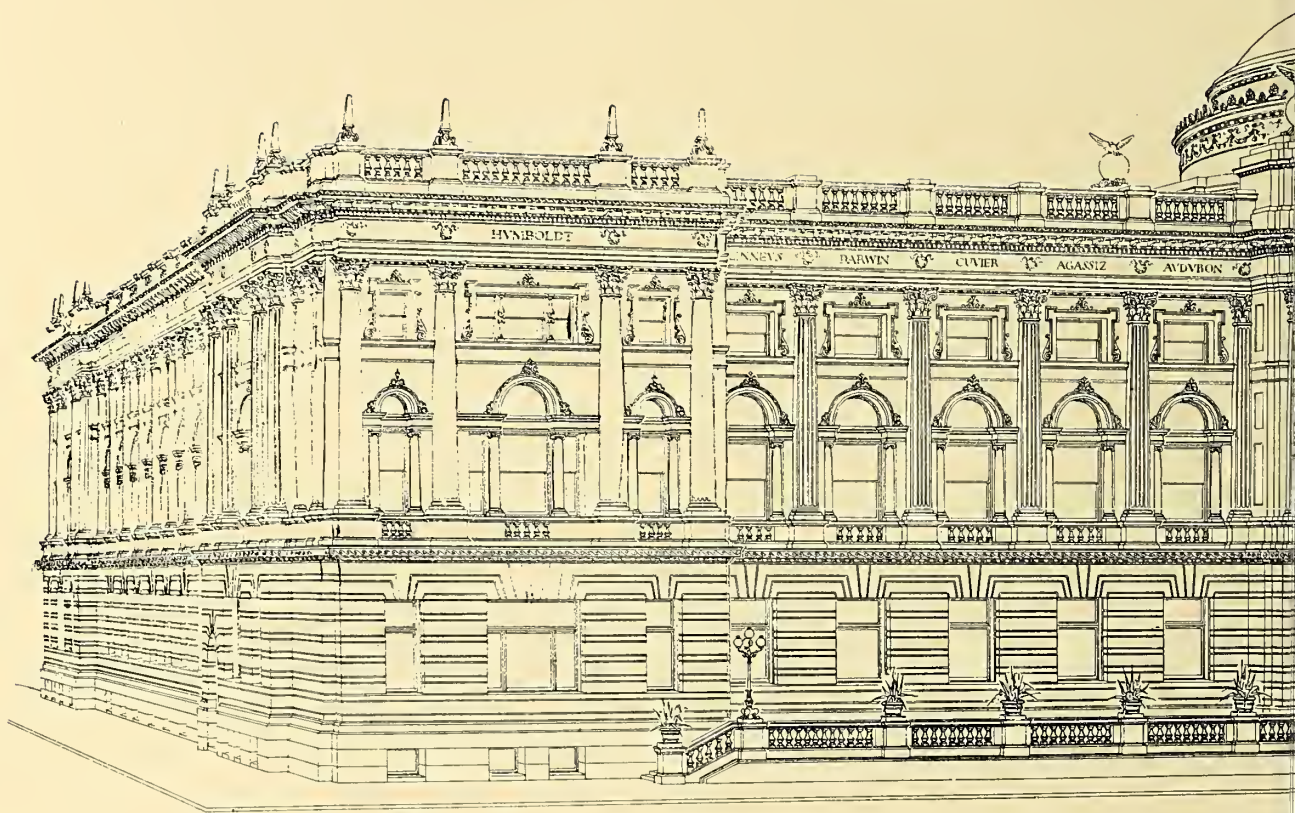


PLAN OF FIRST FLOOR.



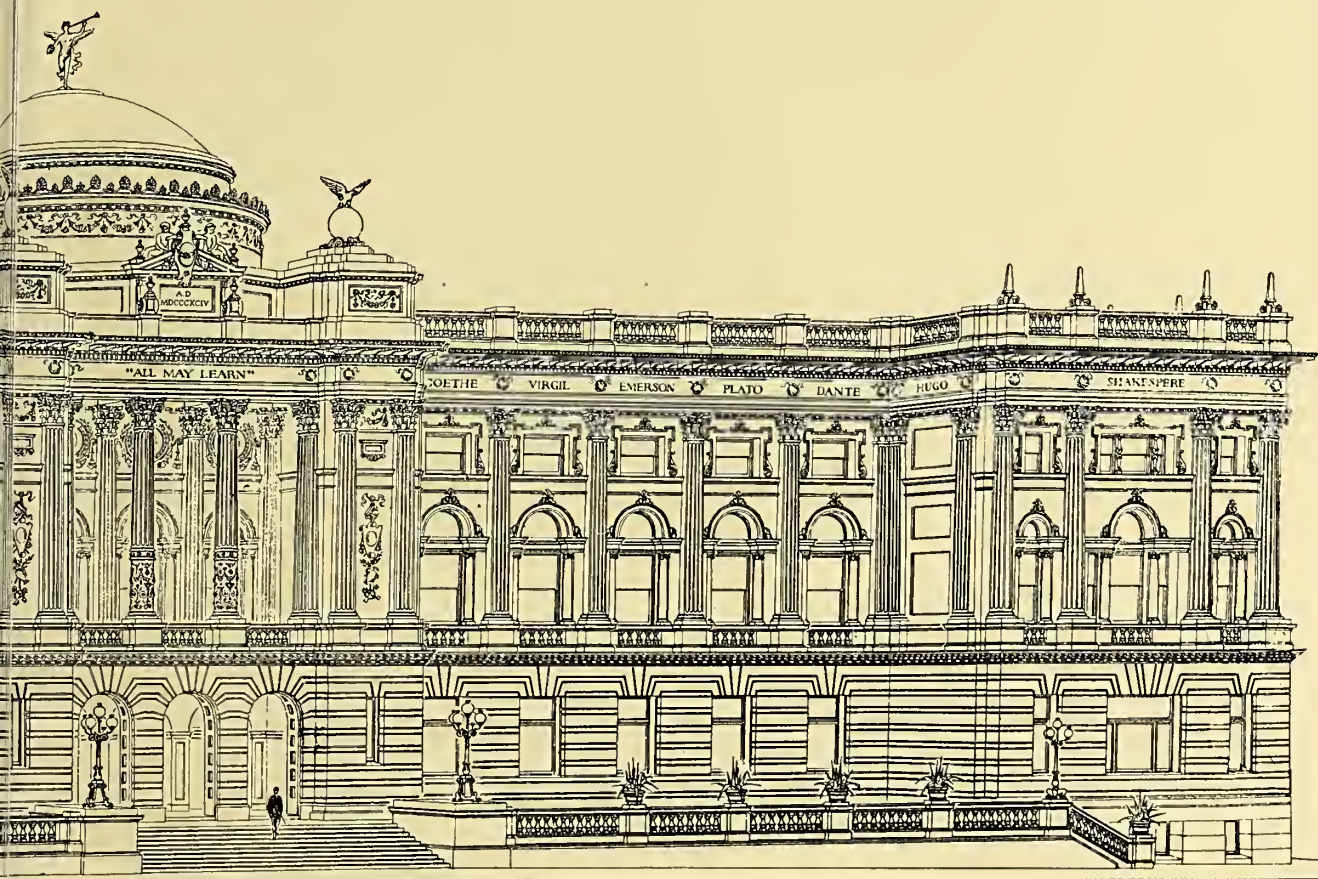
PERSPECTIVE.

PREMIATED DESIGN, MILWAUKEE LIBRARY AND MUSEUM COMPETITION.
H. C. KOCH & Co., ARCHITECTS, MILWAUKEE.



ACCEPTED DESIGN, MILWAUKEE

FERRY & CLAS, ARCHT



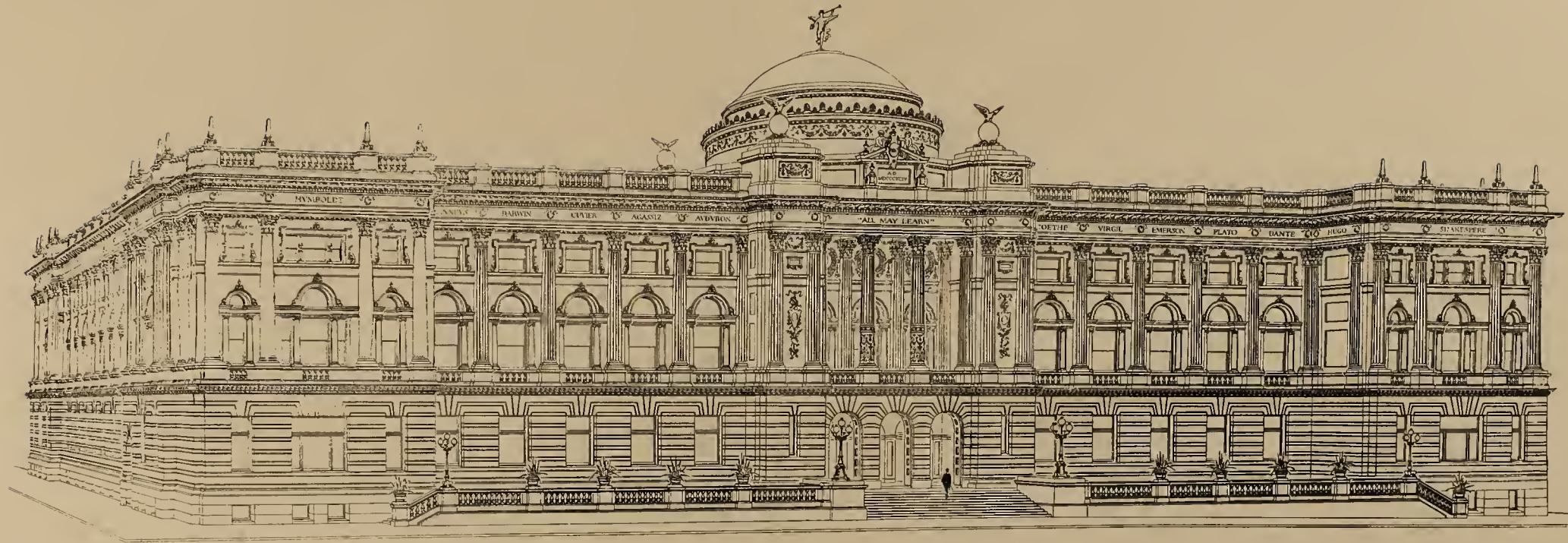
ECTIVE.



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BRARY AND MUSEUM COMPETITION.

HITECTS, MILWAUKEE.



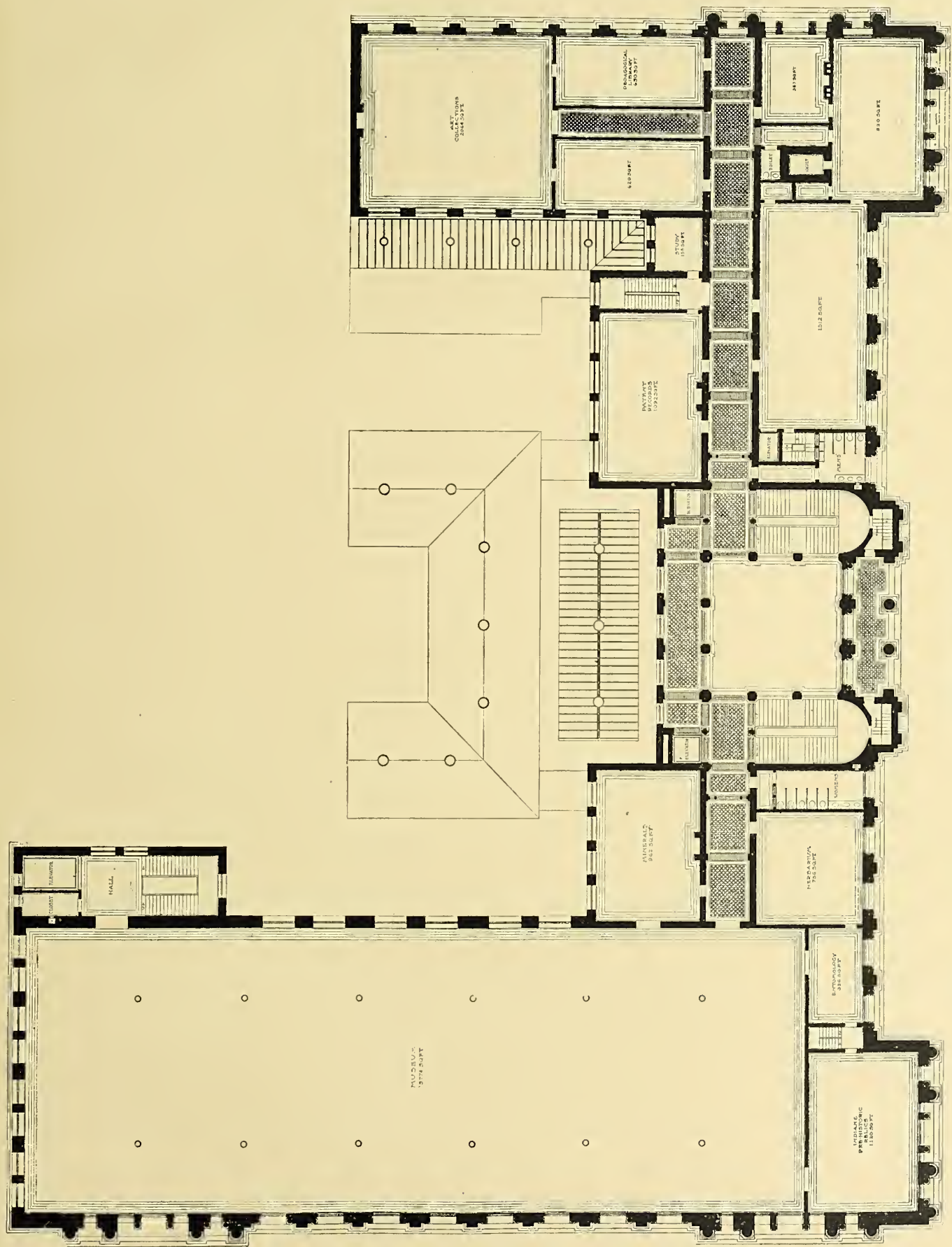
PERSPECTIVE.



ELEVATION.

ACCEPTED DESIGN, MILWAUKEE LIBRARY AND MUSEUM COMPETITION.

FERRY & CLAS, ARCHITECTS, MILWAUKEE.



PLAN OF SECOND FLOOR.

ACCEPTED DESIGN, MILWAUKEE LIBRARY AND MUSEUM COMPETITION.

FERRY & CLAS, ARCHITECTS, MILWAUKEE.

SMITHSONIAN INSTITUTION LIBRARIES



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